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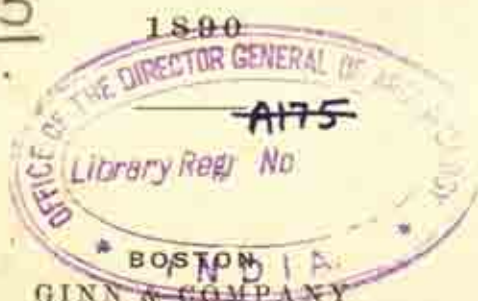
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REVIEW OF PAST WORK.

It has been the aim of the editors that the JOURNAL, besides giving a survey of the whole field of Archaeology, should be international in character, by affording to the leading archaeologists of all countries a common medium for the publication of the results of their labors. This object has been in great part attained, as is shown by the list of eminent foreign and American contributors to the five volumes already issued, and by the character of articles and correspondence published. Not only have important contributions to the advance of the science been made in the original articles, but the present condition of research has been brought before our readers in the departments of Correspondence, and reviews of the more important recent books.

Two departments in which the JOURNAL stands quite alone are (1) the *Record of Discoveries*, and (2) the *Summaries of Periodicals*. In the former, a detailed account is given of all discoveries and excavations in every portion of the civilized world, from India to America, especial attention being paid to Greece and Italy. In order to ensure thoroughness in this work, more than sixty periodical publications are consulted, and material is secured from special correspondents.

In order that readers may know of everything important that appears in periodical literature, a considerable space is given to careful summaries of the papers contained in the principal periodicals that treat of Archaeology and the Fine Arts. By these various methods, all important work done is concentrated and made accessible in a convenient but scholarly form, equally suited to the specialist and to the general reader.

PROGRAM OF VOLUME VI, 1890.

Among the original articles will appear the following:—

Dr. WILLIAM HAYES WARD, of New York;

- I. *Hittite Sculptures.*
- II. *Oriental Antiquities.*

Professor WILLIAM M. RAMSAY, of Aberdeen, Scotland;
Antiquities of Phrygia.

SALOMON REINACH, of Museum of Saint-Germain, France;
Terracottas in American Collections.

Professor ALLAN MARQUAND, of Princeton;
Reminiscences of Egypt in Doric Architecture.

Professor ADOLPH MICHAELIS, of Strassburg;
Three heads of Zeus, Hades, and Poseidon, of the Hellenistic period.

Professor F. B. TARBELL, of Harvard University, and

Dr. JOHN C. ROLFE, of Columbia College;
*Excavations and Discoveries made by the American School of Athens
at Anthedon and Thisbe, in Boiotia.*

Dr. GEORGE B. HUSSEY, of Princeton;

- I. *Greek Sculptured Crowns and Crown-Inscriptions.*
- II. *Distribution of Hellenic Temples.*

Professor MARQUAND and Dr. HUSSEY;
Norms in Greek Architecture.

Padre GERMANO, of the order of Passionists;
*The early Christian Palace recently discovered under the church of
SS. Giovanni e Paolo, at Rome.*

EUGÈNE MUNTZ, of the Beaux-Arts, Paris;
The Lost Mosaics of Rome from the IV to the IX century (II).

Professor A. L. FROTHINGHAM, JR., of Princeton;

- I. *Cistercian Monuments as the earliest Gothic constructions in Italy.*
- II. *Roman Artists of the Middle Ages.*
- III. *Christian Mosaics.*
- IV. *Tombs of the Popes at Viterbo.*
- V. *Early-Christian and Mediæval Monuments in Italy.*

NOTICES.

London Athenæum.—We have no hesitation in saying that no other periodical in the English language is so well fitted to keep the student who lacks time or opportunity to read all the foreign journals abreast of the latest discoveries in every branch of archaeology.

Göttingische Gelehrte Anzeigen.—No comprehensive account of the most recent discoveries exists, and the new American Journal can do most meritorious work and fill a deficiency which, since the time of Gerhard's death, has been often deplored by every archaeologist who had not the good fortune to be at the fountain-heads.

Philologische Rundschau.—We may expect that the American Journal of Archaeology will take an honorable position by the side of those already existing in Europe.

Bibliothèque de l'École des Chartes.—As we think it (the American Journal of Archaeology) is called upon to render real service, not only in the United States, but in Europe and in France, we take pleasure in announcing it here. The plan is vast and well conceived.

Archivio di Letteratura Biblica ed Orientale (Turin).—Periodicals are divisible into three categories: some have no pretensions to be classed as learned; some pretend to be but are not so in reality; others, finally, pretend to be and really are. The periodical which we announce (*The American Journal of Archaeology*) belongs to the last category.

New York Evening Post.—The American Journal of Archaeology will not disappoint the hopes of the friends of the science in America. If not well supported, it will be because there is little real interest in America in classical and mediæval archaeology.

Chicago Evening Journal.—*The American Journal of Archaeology* is alike creditable to the country and to the earnest and scholarly gentlemen who have it in charge, and we are pleased to know that it has already achieved an enviable reputation in Europe.

London Academy.—Mr. J. S. Cotton, at the annual meeting of the Egypt Exploration Fund (London, Dec. 22, 1887), referred to the *American Journal of Archaeology* and the *American Journal of Philology*, which he defined as being of a higher order of merit than any publications bearing similar titles in Great Britain.

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Nos. 1-2.

THE LOST MOSAICS OF ROME OF THE IV TO THE IX CENTURY.

II.*

SANTA CROCE IN GERUSALEMME.—The earliest among the texts relating to the mosaic of Santa Croce dates only from the xv century, though it is well known that the church itself existed as early as the iv century. This text is thus given by Panvinio from the inscription in the chapel of St. Helena: *Valentinian. III Imp. filius Constantii Caesaris, Arcadii et Honorii Impp. nepos ex sorore Placidia, filia magni Theodosii Hispani, in solutionem voti sui ac matris Placidiae et Honoriae sororis, opere vermiculato eam (capellam) exornavit. Inde quasi M. C. annis evolutis, titulus verae crucis, ab Helena Romam delatus, qui supra arcum majorem istius Basilicae in parva fenestra, plumbea theca, muro lateritio clausus tandem latuerat, musivis litteris tamen ab extra id referentibus, quod illic titulus staret, quae jam litterae prae vetustate vix legi poterant, anno Domini MCCCCXCII... cum Petrus Gundisaleus de Mendoza... tectum Basilicae istius et musivas illas litteras fenestras reparare faceret, fabris bitumen quo litterae figebantur indiscrete diruentibus, aperto fenestrae foramine, contra eorum et Cardinalis bene placitum, gloriosus titulus verae crucis, post tot annos ab Helena visibilis apparuit.¹*

* Continued from Vol. II, p. 313.

¹ *De septem urbis ecclesiis*, p. 217. It is also given, with variants, by SCHEADERUS, *Monumentorum Italiae... libri quatuor*, 1592, fol. 123 verso; by CIAMPINI, *De Sacris Aedificiis*, p. 120; and in extenso by DE CORRENTIIS, *De Sessorianis praecipuis passionis D. N. J. C., reliquiis commentarius*: Roma, 1830, p. 83.

Does the presence of an inscription in mosaic on the arch of triumph prove that this arch was entirely decorated with mosaics? This is a question which it would be rash to decide in the present state of our knowledge. The essential point, for the present, is to know that the chapel of St. Helena did possess and still possesses a painting of this kind: *Ecclesia S. Crucis in Hier. in nonnullis locis cum pulcherrima cappella e musivo a reverendissimo Bernardino hispano ti. car. instaurata est cum imagine predicti viri doctissimi ac sacrarum ceremoniarum (sic) erudiss.* It is thus that Albertini² expresses himself at the commencement of the XVI century. About fifty years later, Pompeo Ugonio devotes a few lines, not less eulogistic, to the mosaics of the chapel of St. Helena: *È questa cappella fatta à volta, ornata di figure à Musaico, stimate delle più belle che siano in Roma, le quali, come si dice, vi fece fare Valentiniano Imperatore già più di mille et cento anni fa. Queste al tempo di Alessandro sesto, fece rinovare Bernardino Carvajale Spagnolo, Titolare del Luogo.*³

The scholars of the following centuries, from Severano⁴ to Nibby,⁵ do but repeat these assertions. The latter mentions, beside the restoration of Cardinal Carvajal, works executed by order of Cardinal Albert of Austria in 1577, and entrusted, in all probability, to the skilful Florentine mosaicist Francesco Zucchi. The end of the inscription cited above would tend to prove that Carvajal was careful to have the original compositions reproduced: *Inde vero vetustate murarum, aut inhabitantium incuria, fornice sacelli istius Hierusalem ruinam minanti, et musivis figuris operis Valentiniani, præter canticum Ambrosianum quod in fronte descriptum fuit omnino deletis, Rmus Dñus Bernadinus Lupi Carvajal . . . et fornica ipsam, ac figuras musicas denuo ad instar priorum refecit.*⁶ Even if the general design has been retained, it must be confessed that the details have been singularly modified. We know, for example, that in the modern mosaic St. Helena is resting her hand on the shoulder of Cardinal Carvajal.⁷

SANTA MARIA IN TRASTEVERE.—Benedict III (855–58) caused to be executed at Santa Maria in Trastevere a mosaic, the subject of

² *Opusculum de mirabilibus urbis Romæ veteris et novæ*: ed. of 1515, fol. 82.

³ *Historia delle Stazioni di Roma*: 1588, fol. 207 verso.

⁴ *Memorie sacre delle sette chiese*, t. 1, p. 622: he places the execution of these mosaics in 426.

⁵ *Roma nell' anno 1838, parte mod.*: t. 1, p. 203.

⁶ DE CORRERIUS, *De Severianis reliquiis commentarius*, p. 84.

⁷ BARRET DE JOUY, *Les Mosaïques chrétiennes, etc.*: p. 131.

which is unknown : this is shown by a passage in the *Liber Pontificalis*: *In ecclesia beatae Dei Genitricis, semperque Virginis Mariae Dominæ nostræ, quæ ponitur trans Tyberim absidam majorem ipsius ecclesiæ, quæ in ruinis posita, noviter, atque a fundamentis faciens ad meliorem crevit statum. Fenestras verò vitreis coloribus ornavit, et pictura musivo decoravit.*⁸

Muratori affirms that this work was executed in 856. He opposes very energetically the opinion of those who claim that the words *vitrei colores* mean "paintings on glass."⁹

SAN MARTINO AI MONTI.—The church of San Martino ai Monti (SS. Silvestro e Martino), which was constructed by St. Symmacus and restored by Hadrian I, was adorned under Sergius II (844–47) and Leo IV (847–55), the nave with paintings, and the tribune with mosaics on a gold ground: (Sergius II) *sanctorum Silvestri et Martini ecclesiam, quæ . . . per oblitana tempora defecta vetustate maruerat, ruinisque confracta diu antiquitus lacerata manebat, in meliorem pulchriorumque statum a fundamentis perfecit. Absidam quoque ipsius aureis musivo perfuso coloribus ingenti amore depinxit.*¹⁰ (Leo IV) *beati Silvestri et Martini ecclesiam, quam dominus Sergius prædecessor ejus noviter ab imis ædificaverat multis quidem pulchrisque decoravit ac depinxit coloribus.*¹¹

In the time of Pompeo Ugonio these works still existed in part, but they very soon disappeared: *Le pitture del corpo della chiesa essendo durate fin' à nostri tempi, non ha molto, sono state, parendo hormai troppo vecchie, imbiancate, et il musaico della Tribuna per la lunghezza degli anni si è totalmente consumato . . . La Tribuna, che, come si è detto, fu da Leone III di musaico lavorata, in luogo del quale modernamente sopra il fregio della iscrizione di esso Leone, vi sono state fatte pitture comuni.*¹² The mosaic inscription of the tribune was still legible and was given by the learned Roman (fol. 254 *rec.*), confirming the assertion of the *Liber Pontificalis*:

SERGIUS HANC CEPIT PRESVL QVAM CERNITIS AEDEM
CVI MORIENS NVLLVM POTVIT CONFERRE DECOREM
SED MOX PAPA LEO QVARTVS DVM CVLMINA SISTIT (SVMPST)

⁸ *In vita Benedicti III*, ed. Duchesne, t. II, p. 147.

⁹ *Antiquitates mediæ ævi*: Milano, 1739, t. II, *Dissert.* 24.

¹⁰ *Liber Pontificalis*, in *vita Sergii II*, ed. Vignoli, § III, p. 55; ed. Duchesne, t. II, p. 93.

¹¹ *Liber Pontificalis*, in *vita Leonis IV*, ed. Vignoli, § III, p. 132; ed. Duchesne, t. II, pp. 131, 139.

¹² *Hist. delle Stazioni di Roma*, fol. 253 *ver.* 255 *rec.*

ROMANAE SEDIS DIVINO TACTVS AMORE
PERFECIT SOLERS MELIVS QVAM COEPTA [ANTE] MANEBAT
ATQVE PIA TOTAM PICTVRA ORNAVIT HONESTE
COENOBIVMQVE SACRVM STATVIT, etc., etc.

SAN PANCRAZIO.—Baronius¹³ and Bosio¹⁴ relate that, in the old mosaic of the church of San Pancrazio, the following inscription was formerly to be read: it had already been copied in the *Itinerary of Einsiedeln*, but without any indication of the kind of work to which it belonged:¹⁵ *Ob insigne meritum et singulare B. Pancratii M. beneficium, basilicam vetustate confectam, extra corpus martyris neglectu antiquitatis exstructam Honorius Episcopus Dei famulus, obruta vetustatis mole, ruinamque minante, a fundamentis noviter plebi Dei construxit, et corpus martyris, quod ex obliquo aulae jacebat, altari insignibus ornato metallis proprio loco collocavit.* This inscription, according to the *Itinerary*, was in the apse of the church: it had doubtless disappeared long before the time of Baronius and Bosio, as the latter relates that he copied it, *molti anni sono*, in a collection of ancient inscriptions preserved in the Colonna Library. If this mosaic, even the subject of which we do not know, was in the tribune, it is rather strange that the above text was not put into metrical form, as this form was obligatory in apsidal compositions, and it would be difficult to find an exception to this rule during the entire Middle Ages.

Padre Paolino di San Bartolommeo¹⁶ tells us that the church still contained, in his day (1803), ancient frescos which seemed to date from the time of Honorius: *Honorius ergo fuit ille maximus instaurator, qui hanc aedificii molem, quam hodie videmus, . . . excitavit. Hoc luculenter apparet ex picturis veteribus, ecclesiae fulcris adhuc inhaerentibus, quae postea quam deavo fuissent firmata, et a Ludovico Card. de Torres restaurata, delapsa ex aliquibus calce, veteres illas picturas satis rudes ostendant, quas ad Honorii aevum jure referre possis.*

SS. SILVESTRO E MARTINO.—In the subterranean church of SS. Silvestro e Martino (at present contained within the church of San Martino ai Monti) there is a mosaic representing the Virgin standing and a Pope kneeling by her side, which is attributed to the pontificate of St. Silvester. This mosaic, 80 centim. wide and about one metre

¹³ *Annales, sub anno 658*: cf. MAI, *Vetorum Scriptorum nova Collectio*, t. v, p. 146, note.

¹⁴ *Roma sotterranea*: ed. 1632, p. 113.

¹⁵ URLICH, *Codex urbis Romae topographicus*: Wurtzburg, 1871, p. 63.

¹⁶ *De basilica S. Pancratii M. Christi disquisitio*: Roma, 1803, p. 14.

high, is completely ruined. The greater part of the enamel cubes have fallen from their sockets; the background has no longer a definite color; of the forms nothing but confused outlines remain. To complete the misfortune, this interesting relic is placed at the back of a niche closed by a dull glass, which protects it, not from the dampness, but from the light, and it is impossible to examine it closely.¹²

As early as the first half of the XVII century, in the time of Cardinal Francesco Barberini, the state of the mosaic had already given rise to so much anxiety that the Cardinal, an enlightened lover of Christian antiquities, caused a copy of it to be executed, also in mosaic, which is now placed over the original; but the execution was as faulty as the intention was praiseworthy. While respecting the external form of the model, the artist failed to give to his reproduction even a shadow of the character of or resemblance to the original. Still, we are obliged, in order to form an idea of the composition, attitudes, action, and costume, to consult this reproduction, executed with care if not with talent. We will supplement this with a contemporary description by the learned Filippini, General of the Carthusians.¹³ The Virgin is represented as a three-quarters figure, less than life-size, facing the spectator; she wears a blue mantle with yellow fringe, which covers her head, and she has a gold nimbus with rays. With her right hand she blesses in the Latin form; while her left hand rests on the shoulder of the Pope. On the right is an almost microscopic kneeling figure, robed in a yellowish mantle, and wearing a white tiara ornamented with a crown at its base. This is Pope Sylvester, who turns toward the Virgin, raising his hands in adoration. The group has a gold background.

In consequence of the age of the original¹⁰ and the imperfection of

¹² I am quite disposed to share the opinion of Filippini and the authors of the *Beschreibung der Stadt Rom* (t. III, part 2, p. 244), who consider this niche, made above the altar, to be primitive. In this case, the mosaic has neither been displaced nor mutilated.

¹³ *Una effigie di Maria ch'era di marmo, la quale, se ben in parte è disfatta, essendone state levate, come a bello studio, molte pietre del mosaico, non dinno si discernere che stava in piedi, tenendo la mano destra in atto di benedire e la sinistra coperta. Appresso la spalla destra di San Silvestro, a lui vicino, inginocchiato co' i Regni Papale in capo e con le mani giunte, in atto d'orare (Ritratto di tutto quello che appartiene all' antichità, e venerazione della chiesa de Santi Silvestro e Martino de' Monti di Roma: Roma, 1639, p. 24).*

¹⁰ *Imago B. Virginis penitus exarsa effluit tam humidi loci intemperie quam ætate victa (MONTFAUCON, *Dicirina Italica*, 1702, p. 127). The same author speaks of *musivi operis antiquissimi reliquiae hinc inde sparæe vetustate labuntur in dies (Ibid.)*.*

the copy, it would be rash to judge of the age of this mosaic by the characteristics of its style. All that can be affirmed is, that the figure of the kneeling Pope of such diminutive size and with his tiara, is a motive of the advanced Middle Ages rather than of the century of Constantine. Do the texts which relate to the history of the church furnish other data? The first among them, the *Liber Pontificalis*, tells us, in fact, that Pope Saint Silvester erected a church near the Baths of Domitian (or perhaps only changed a part of these baths into a church): *Hic (Silvester) fecit in urbe Roma Ecclesiam in praedium cujusdam Presbyteri sui, qui cognominabatur Equitius, quem titulum Romanum constituit, juxta Thermas Domitianas, qui usque in hodiernum diem appellatur titulus Equitii . . . Ejusdem temporibus constituit Beatus Silvester in Urbe Roma titulum suum, in regione III, juxta Thermas Domitianas, qui cognominantur Trajanas, titulum Silvestri.*²⁰ This church, according to some of the Roman scholars, was dedicated to the Virgin.²¹ It first bore the name of *titulus Silvestri*, which was afterward changed into that of *SS. Silvester et Martinus*. Then follows a complete silence with regard to it, and we hear of it no more until the XVII century.²² At that time, in 1637, the subterranean building was brought to light, and Filippini published a very conscientious description of all its ornamentation, especially of its interesting paintings, now destroyed. Neither at this time nor since has it been possible to find a positive text in favor of the origin attributed to the mosaic.²³ The erection or the restoration by S. Silvester of the church bearing his name, is the only fact historically established. To this fact should be added, according to Filippini, a

²⁰ *Lib. Pont.*, in *vita S. Silvestri*; ed. Duchesne, t. i, p. 170.

²¹ Alcuni, con più considerazione, fanno giudizio che questa chiesa fosse dedicata da San Silvestro alla gloriosa Regina del cielo, pigliandone argomento da una effigie di Maria (FILIPPINI, loc. cit.). This seems like reasoning in a vicious circle. Viveva tra alcuni dei Religiosi del Carmine bastante notizia dell' oratorio di San Silvestro, ma quanto al pubblico si poteva dir, che così di questo, come della chiesa da lui eretta, non restasse quasi più memoria d' alcuna sorte, poichè, per lo spazio di tanti secoli giacevano occulti, come del tutto dimenticati, quando nel corrente anno 1637 ritornano in luce, e rimangono esposti alla pubblica venerazione (FILIPPINI, p. 26).

²² NIBBY, *Roma nell' anno 1838*; pp. 543-44.

²³ FURIETTI is too positive when he says (*De Musicis*, p. 68): *Imperatorum morem gerens D. Silvester Pontifex, in Domitianis Thermis, quae in Dei cultum sacrauerat, Salvatoris Beataeque Virginis, nec non sui ipsius imagines de musico pictus exhibuit, ut ex Philippino refert Cl. V. Boldettus.* I do not know what this image of the Saviour can be, of which MARTIGNY, also, speaks in his *Dictionnaire*.

very strong presumption based on a passage in the often-cited letter of Hadrian to Charlemagne. This passage is here given, though it appears to refer, in a general way, to the various churches built by S. Silvester, rather than to the sanctuary erected in the Baths of Domitian: *S. Silvester et Constantinus Christianissimus imperator venerati sunt sacras imagines, et cum nomine Christianitatis palam coram omnibus fideliter atque mirabiliter eas ostenderunt, et a tunc usque hactenus sanctorum pontificum, videlicet Silvestri, Marci et Julii mirae magnitudinis*²¹ *sanctae eorum ecclesiae apud nos sunt depictae, tam in musivo, quamque in ceteris historiis cum sacris imaginibus ornatis.*²²

Neither do the paintings of the subterranean church—now almost completely effaced, but of which Filippini has left us a good description—help to decide the question. There are to be seen, among other figures, Christ between SS. Peter and Paul, Processus and Martinianus, the Virgin between female saints (two different representations), then a lamb, palm trees, a colossal painted cross (still intact), etc., etc. Even should we add to these sacred symbols the stag, which Filippini believes to have belonged to the pagan decoration of the edifice (wrongly, according to our view; the stag being one of the favorite figures in Christian art), there still remains, for the date of the execution of these works, a period of several centuries, between which the historian would find it difficult to choose. Does it follow that the main feature of the mosaic, that is to say, the Virgin without the Pope, may not be ancient? By no means. I have wished only to show what are the limits of the discussion, without, in the present state of the question, attributing the work either to the reign of Constantine or to the Middle Ages: this would be entering the domain of conjecture, which I desire to carefully avoid.

S. SUSANNA "INTER DUAS LAUROS."—Andrea Fulvio, in his *Antiquitates urbis*, the preface of which is dated in 1527, mentions briefly the mosaic of S. Susanna *inter duas lauros* or *duas domos*.²³ A more detailed description of this work is given by Pompeo Ugonio, who

²¹ The epithet *mira magnitudo* surely cannot apply to this very small subterranean church.

²² LABBE, *Sacrosancta Concilia*, t. VII.

²³ *Templum S. Susannae inter duas lauros, aliter ad duas domos a Leone III conditum, ut in templi abside ex musivo apparet* (fol. 33 verso).

(Schedae) *Alexandri in cod. Barberini 3011 in quo videntur etiam S. Leonis et Caroli imp. imagines ex quodam musivo expressae. Vide et Bolland., t. II, Aug., p. 625. Bosius aliquos habent "marcerat" quam Arringius, t. II, p. 101, omisit verba "dudum haec." SPON, *Misc.* 285 (MARINI, apud MAI, *Veterum Scriptorum nova Collectio*, t. V, p. 155).*

saw the work still entire. It will be interesting to quote the words of the learned Roman antiquary: *Nella Tribuna vi sono à musaico dipinte nove imagini, le quali per havere in se qualche cosa degna di consideratione, riferirò ad una ad una, come ivi si veggono. Nel mezzo dunque di detta Tribuna, vi si vede l' imagine di Christo nostro Salvatore. Quelle che stanno à man destra sono la Madonna, et poi S. Pietro, et poi Santa Susanna, et l'ultimo Papa Leon Terzo, il quale rinovò questa chiesa, onde nella man destra tiene una chiesa, et in testa quel segno qualro che, come dicemmo nella chiesa di S. Cecilia, dinota che quel tale che il porta fusse ancora in vita. A man sinistra si vede S. Paolo, l'altro è S. Caio,²⁷ il terzo S. Gabino quello Zio, et questo Padre di S. Susanna. L'ultimo che armato quivi si vede, è Carlo Magno che rimesse Papa Leon III nella sedia, da alcuni seditiosi di Roma disaccacciato.²⁸ Et debbe essere facilmente questo musaico fatto in quel tempo che Carlo Magno era in Roma, dove Leone III lo incoronò, et creò Imperatore, come più chiaramente ne è fatto memoria in un' altra pittura che è in Laterano, nella sala Leoniana minore, nella quale veggiamo fin' hoggi dipinto à musaico Carlo così armato come è quì in Santa Susanna. Percioche quella sala ancora fu fatta da Leone III. Qui similmente si può notare l'immagine di Carlo havere il segno quadro intorno alla testa, come di huomo che nel tempo nel quale questa opera si fece viveva. Le parole che nel fregio intorno, à pie delle dette imagini si leggono, et che fanno mentione della renovatione di questa chiesa fatta da Leone Terzo, son queste: DVDVM HAEC BEATAE SVSANNAE MARTIRIS AVLA COANGVSTA ET TETRO EXISTENS LOCO MARCVERAT QVAM DOMINVS LEO PAPA TERTIVS A FVNDAMENTIS ERIGENS ET CONDENS CORPVS BEATAE FELICITATIS MARTYRIS COMPTE AEDIFICANS ORNAVIT ATQVE DEDICAVIT.²⁹ (Leo III) aedificavit ecclesiam cum absida de musico, amplissima et caticumina mirifica atque camera decorata, seu presbyterium et pavementum marmoribus pulchris ornavit.³⁰*

This composition, therefore, is similar to those which we find in almost all apses after the fifth century: Christ, the saints, the donors. In the number of its figures as well as in the position given to the founders

²⁷ Pope Calix. This figure is reproduced in CIACCONIO's Collection, *Latin MSS.*, No. 5407, fol. 183, Vatican Library.

²⁸ *Carolus dexteram extendit ad liberationem Leonis III Papae, quem a calumniis objectis tutatus (tutus?) est.* CIACCONIO's Collection, loc. cit.

²⁹ *Historia delle Stazioni di Roma*: Roma, 1588, fol. 192 verso, 193 recto. Cf. DE ROSS, *Bullettino di Archeologia cristiana*, 1884, p. 181.

³⁰ *Liber Pontificalis, in vita Leonis III*, ed. Vignoli, t. II, p. 242; ed. Duchesne, t. II, p. 3.

of the basilica, it is related to the mosaic of the oratory of San Venanzio, with this difference, that, in the latter, the half-figure of Christ floats in the clouds, while at Santa Susanna it is placed below in the midst of the other figures. Two drawings of Ciacconio's Collection (No. 5407, ff. 74, 96) have preserved the figures of Leo III and Charlemagne. Pope Leo, robed in a red tunic and a blue mantle, holds the church which he has rebuilt; a pallium decorated with a red cross and shoes with a red trefoil complete his pontifical costume. His face is youthful; behind his head is a rectangular nimbus in green, bordered on the left by a blue line. Charlemagne wears a very short blue tunic and a yellowish mantle, his blue nimbus is bordered on each side with white. The ground on which he stands is of a light green and shaped like a hillock.²¹ In the drawing of folio 74, the Emperor is of much smaller size than the Pope, and appears to be placed in the second rank, but nothing indicates that this difference existed in the original composition.

A note in the same collection, after having substantially reproduced the description of Ugonio, informs us regarding the subsequent history of the mosaic: *Hoc autem opus dirutum fuit anno D. 1595, innovante ciborium illustrissimo Card. Rusticucio Farnensi, vicario Papae, et egregie picturis et marmoribus variis ornante.* Judging from another passage, the destruction was not complete, and several figures escaped the general ruin, temporarily at least: *In opere vermiculato S. Susannae quod olim exstabat, nunc proxime dirutum, viscebantur inter alias imagines effigies Leonis III Papae ex una parte et in altera Caroli Magni.*²²

EUGÈNE MÜNTZ.

École des Beaux-Arts,
Paris.

²¹ Reproductions of Charlemagne and Leo III are given in ALEMANNI, *De lateranensibus parietinis*, pl. i, p. 7 (ed. of 1756); CIAMPINI, *Vat. Monim.*, t. ii, p. 140. Charlemagne is here represented as smaller than Leo III, as in Ciacconio's drawing on folio 74; MONTFAUCON, *Les Monuments de la monarchie française*, t. i, pl. xxii, p. 276; SANTARELLI, *Oltraggio fatto à Leone III*; Rome, 1815, pl. iii, p. 15.

²² According to ALEMANNI (*De lateranensibus parietinis*, p. 7), each figure was placed on a hillock: *imagines singulae . . . singulis in collibus eminebant.*

INTRODUCTION OF GOTHIC ARCHITECTURE INTO ITALY BY THE FRENCH CISTERCIAN MONKS.¹

[PLATES I-XI.]

The object of this series of papers² is to show that a group of monuments erected by the French Cistercian monks, and here for the first time fully described and illustrated, were the earliest structures in Italy in which the principles of transitional-Gothic architecture were carried out. In these works, as in no others in Italy, native archi-

¹ The following list of books referring to Cistercian monuments is given to facilitate reference.

LÜBBE and VON QUAST in the *Organ für Christliche Kunst*, 1853. ADAMY, *Architektonik*, II, 2, pp. 362-91. M. DE MONTALEMBERT in *Bulletin Monumental*, vol. XVII, p. 130. ARBOIS DE JUBAINVILLE, *Étude sur l'État intérieur des Abbayes Cisterciennes et principalement de Clairvaux au XII^e et au XIII^e siècle*: Paris, 1858. MARIQUE, *Cisterciensium Annalium* libri IV: Anisio, 1642-59. JONGELINUS, *Notitia Abbatiarum Ordinis Cisterciensis* VII, 78: Coloniae Agrippinae, 1640. SCHNAAKE, *Geschichte der bildenden Künste im Mittelalter*, V, *passim*.

For FRANCE—VIOLETT-LE-DUC, *Diction. d'Architecture*, I, II. L. ROSTAN, *Études d'arch. comparée, Trois Abbayes de l'ordre de Clairvaux*, 1852. REVOIL, *L'Architecture Romane du Midi de la France*, II, pp. 8, 9, etc. F. DE VERNEUIL, *L'Architecture Byzantine en France*, p. 213.

For GERMANY—DOHME, *Die Kirchen des Cistercienserordens in Deutschland während des Mittelalters*, Leipzig, 1869; also his recent *Geschichte der deutschen Baukunst*, pp. 153-77 (Berlin, 1887) in the series of the *Gesch. d. deut. Kunst*. WINTER, *Die Cistercienser des nordöstlichen Deutschlands*: Gotha, 1868-71. PAULUS, *Die Cistercienser-Abtei Maulbronn*, 1875. HEIDEN, V. EITELREICH und HIESCH, *Mittelalterliche Kunstdenkmale des österreichischen Kaiserthums*: Stuttgart, 1858.

For SWITZERLAND—RAHN, *Die Mittelalterlichen Kirchen des Cistercienserordens in der Schweiz*: Zürich, 1872.

For ITALY—MOTHEZ, *Die Baukunst des Mittelalters in Italien*, 1884 *sqq.* THODE, *Frank von Assisi und die Anfänge der Kunst der Renaissance in Italien*: Berlin, 1885. AGINCOURT, *Histoire de l'Art*. Various monographs and other works whose titles are given in Note 8.

For ENGLAND—Monographs, especially those mentioned by SCHNAAKE, *op. cit.*, v, notes to pp. 175-6.

² These papers are based upon three journeys made in 1881, 1887 and 1889, during which some forty monuments in Central Italy, either Cistercian or derived from Cistercian originals, were studied and photographed.

fects were able to study the new style of the Ile-de-France, modified by Cistercian peculiarities but entirely or comparatively free from any Italian perversions. It will become evident, as these monuments are here published, that the churches and monasteries built by the Franciscan and Dominican orders throughout Italy were not, as they have been commonly supposed to be, the earliest examples of the Gothic style in Italy; but that both these orders borrowed much from the earlier Cistercian buildings; and that, furthermore, in doing so, they departed from the principles of Northern Gothic in various ways. A collateral to this is, of course, that it was not from Germany but from France that the most fruitful breath of Gothic influence came into Italy. The conclusion is that the Cistercian monuments are both earlier in date and purer in style. They have even a broader interest; for, while they seem as advanced as contemporary work in France itself, I believe that nowhere in the mother country can Cistercian monasteries of this date be found in as good preservation as those of Fossanova and Casamari—with not only their churches and cloisters but their chapter-houses, refectories, hospitals, guest-houses, store-houses and other monastic buildings and dependencies, nearly all erected in the half-century that witnessed the transition from the Romanesque to the Gothic. It so fell out that this coincided with the period of greatest expansion of the order. To show how extensive and general was this Cistercian invasion of Italy, I append a genealogical tree of the monasteries founded in Italy, compiled from Janauschek, *Originum Cisterciensium T. I.*² In order to understand the architectural influence of the order, a further list should be added of Cistercian numeries and of parish, collegiate, and monastic churches and even secular buildings, which followed the Cistercian style.

This is not the occasion for a review of the recognized history and characteristics of the various schools of Italian Gothic. But it may be well to recall that the buildings mentioned in text-books as the earliest in which advanced transitional forms appear are: (1) S. Andrea

² I cannot guarantee its perfect exactitude: a number of monasteries have doubtless been omitted. I believe I could add a number to the list. For example, in the filiation of Fossanova, of which alone I have as yet made a careful study, I have added the monastery of Valvisciolo, founded in 1151, whose charter of foundation is in the possession of Mgr. Presutti in Rome, from whom I derived the information after having visited the monastery. In several cases, Janauschek places on the doubtful list institutions that were very probably in good monastic standing.

at Vercelli, founded in 1219, a work of Anglo-French transition by a foreign architect; (2) the upper church of S. Francesco at Assisi, finished about 1253 by Fra Filippo da Campello; (3) S. Francesco at Bologna, built between 1236 and 1245. Of these three churches, situated in such different parts of the country, that at Vercelli was too near the French frontier to exercise much influence upon the development of Italian architecture; the two other buildings are important, but not because of their age, for the Cistercian buildings which may have served as models for their architects had already been erected from thirty to fifty years.

Neither is this the place for general considerations or conclusions, or for a comparative study of Cistercian monuments, which cannot be attempted until the architectural material has been brought forward. Still, a few introductory remarks may be deemed requisite to explain in general the position and condition of the subject.

Although the Cistercian monuments in question have not been carefully studied, enough has been known of some of them⁴ to furnish ground for the general judgment (expressed by several writers, such as Thode and Ojetti⁵), that Gothic architecture was introduced into Italy by the Cistercians, in contrast to the opinion of the majority of writers who favor Germany. This is but parallel to the judgment of Dohme for Germany, and of Rahn for Switzerland, founded on a broad study of the Cistercian monuments of their countries. Dohme remarks of the order that it is "the missionary of Gothic, *i. e.*, of French art on German soil."⁶ But through lack of illustration and detailed scientific study, based upon a clear understanding of Gothic principles, the demonstration of this opinion has yet to be made.

In support of such claims, the following facts should be remembered: (1) the Cistercian was the greatest of the monastic orders at the time when the passage was made from the Romanesque to the Gothic style; (2) the order originated in France where this passage took place; (3) it spread thence over the whole of Europe, carrying

⁴Fossanova, Casamari, Valvisciolo, Sta. Maria d'Arbona, Chiaravalle di Castagnola, Sta. Maria di Ferentino, are described or mentioned by MÖHRER in his *Baukunst des Mittelalters in Italien*. Without illustrations or details, his text is also deficient in a perception of the distinctive interest and place of these Cistercian buildings.

⁵THODE, *Fraus von Assisi*, pp. 334, 339, 342-45, and *passim*. OJETTI, in *La Mostra di Roma all'Esposizione di Torino*, pp. 142 *seq.*

⁶*Die Kirchen des Cistercienserordens in Deutschland während des Mittelalters*, p. 4.

with its French ideas; (4) it developed a special and characteristic style of architecture and was the greatest building agency then existing; (5) it was not a congeries of independent institutions but a band of closely knit and interdependent monasteries, thus leading to unity in architecture as in life. This is sufficient to account for the fact that, although in France itself the importance of their share in the development of architecture may not be great, the Cistercian monks were nevertheless the principal agents for the propagation of the Gothic style in every other country of Europe.

The order has long fallen, most of its monasteries are abandoned and in ruins, and no one has yet been found to construct a fitting memorial to the artistic worth of these monks of the twelfth century.⁷ Their monuments in France and England are still largely neglected; Germany has been rescued from this reproach by Dohme (though inadequately in the matter of illustration). As for Italy, it shall be my task to illustrate the monasteries of the central section of the peninsula, which are of the greatest interest for the Gothic style, leaving those of the north and south for other students. The northern monasteries, under the influence of Chiaravalle and other early foundations, retained the Romanesque style; those of the south were for the most part founded from Casamari and Fossanova, and therefore depend in their architecture upon these monasteries of the Roman province.

I shall not begin by illustrating what is perhaps the earliest of the single transitional monuments, the church of Chiaravalle di Castagnola near Jesi in the province of Ancona. The church alone remains; all its ancient monastic buildings having been destroyed: besides, it never held an important place in the order. The best example would be a monastery of the same period whose historical importance and influence were great. There is, not far south of Rome, a monastery which retains more completely than any other in Italy its original style in all its various parts, and illustrates, in itself alone, the early Romanesque style and the development into Gothic through the various transitional stages. This is Fossanova, the eldest Italian child of

⁷ An approach to such a memorial would doubtless have been the great work of the COUNT DE MONTALEMBERT, *Les Moines de l'Occident*, had he lived to publish the volumes devoted to the Cistercian order. Many years were devoted by him to a study of the Cistercian monasteries over Europe, five hundred of which he visited.

Clairvaux,² which was the main source of the colonies that filled Italy with the monastic reform. An examination of the genealogical tree given above shows that, of the Italian monasteries, eleven, mostly in Northern Italy, are derived from La Ferté (1113), the first descendant of the head of the order, Cîteaux (1098); three only originate from Pontigny (1114), and four from Morimond (1115)—besides five direct from Cîteaux or other sources. Thus, these three out of the four founders of the order (under Cîteaux) had established but nineteen monasteries, while fifty-seven were founded from Clairvaux alone, when it had at its head St. Bernard, to whose influence the rise of Cistercianism in Italy is almost entirely due.

From Clairvaux originated the four greatest monasteries in the peninsula—Fossanova (1135), Cusumari (1140) and SS. Vincenzo ed Anastasio (1140) in the States of the Church, and Chiaravalle (1135) in Lombardy. Of these the earliest, largest, and best preserved is Fossanova.³

I. THE MONASTERY OF FOSSANOVA.

HISTORY OF THE MONASTERY.

The history of Fossanova by no means begins with the advent of the Cistercians: according to tradition, it dates back to the time of St. Benedict himself. Its church was then dedicated to S. Salvatore di Mileto, and it was inhabited by monks originally sent from Monte Cassino. It is recorded that among its monks was one who became,

²The following are some references to Fossanova, either historical or artistic:—FERD. UGHELLUS, *Italia Sacra*, 2nd ed. 1717-21, I. I. MANRIQUE, *Cisterciensium Annalium* . . . libri IV; IX. I. 7. JOSEPHUS, *Notitia Abbatiarum Ordinis Cisterciensis* . . . : Colonia Agrippina, 1640, VII. 78. MOROSI, *Dizionario di Erudizione*, etc., tom. 26, p. 18. TEODORO VALLE, *La regia e antica Piperno* (Storia antica di Piperno): Napoli, 1637-1746, II. I. 4. GIUSEPPE MAROCCHI, *Monumenti dello Stato Pontificio*, etc.: Roma, 1833-37, XIV. I. AMICO RICCI (Marchese), *Storia dell'Architettura in Italia*, vol. II, p. 40: Modena, 1858. GIULIO PACCARSI, *Monografia del monumento nazionale di Fossanova presso Piperno*: Fermo, 1882. *Mostra della Città di Roma all'Esposizione di Torino nell'anno 1884*, pp. 143-6. OSCAR MÖTHES, *Die Baukunst des Mittelalters in Italien*: Jena, 1884, pp. 691-3. LEOPOLDUS JANASCHEK, *Origium Cisterciensium Tomus I*: Vindobonæ, 1877.

³Chiaravalle near Milano was founded, according to the best authorities in the same year, and may dispute precedence with Fossanova: see JANASCHEK (*op. cit.*, p. 39) for the date V or XI Cal. Aug. 1135, and for the different authorities for these and other dates. It is, however, built in the Romanesque style, and so are the great majority of monasteries founded from it, so that the entire group has no bearing upon the present question.

in 827, Pope Gregory IV. Later, the monastery came under the patronage of the counts of Aquinum.¹⁰ In course of time, a new church was built, and dedicated to *Sin. Potentiana*. This small and plain building is still standing among the later constructions, a solitary and mournful relic of those early days. Like other monasteries, it seems to have suffered from the decadence of the tenth and the wars of the eleventh century. An indication of returning power is given by an act of donation executed in 1028 by the Republican Government of the neighboring city of Piperno. It conveyed to the monastery a considerable tract of territory in this region, including two churches.

Before St. Bernard made his triumphant journey through Italy in 1137, Fossanova had been given to him by Innocent II. In October 1135, it was formally united to the Cistercian order, being affiliated to Hautecombe in Savoy, which had been founded directly from Clairvaux only a few months before.¹¹ It is suggested by Janauschek that, having been itself so recently established, Hautecombe would hardly

¹⁰ These facts are given by PACCARANI in his monograph on Fossanova mentioned in Note 8, and he refers to the works of VALLE (q. v.) and VALENTI-MAGNONI.

¹¹ The references to authorities mentioning these facts are given in full by JANAU-SCHKE, *Orig. Cist.*, pp. 57-8. I will here quote him in full, with his references, usually confined to initial letters of authors, whose full titles it would be superfluous to give: FOSSA-NOVA, FOSSA NUOVA; olim *Badia del Fer Appio*.—Hoc monasterium, in loco *Fori Appii* ad *Amasenum* fluvium, in *Campania* et *diocesi Terracinenasi* situm atque tria milliaria *Italiana* a *Priverno* distans, cujus nomen et FOSSA NOVA. *Uffenti* aquas excipiente et in patules decurrente derivatur, perantiqua CASSINENSIS sedes fuit, primum S. SALVATORI post S. POTENTIANAE nuncupata, quam a comitibus Aquinathus exstruam esse et Gregorium IV P. M. olim in gremio suo foris tradunt. Fama dein ordinis Cisterciensis in illas *Italiane* plagas delata monachi quoque Fossae-Novae ejus severitatem tentarunt et ALTAE-CUMBÆ (de linea *Claraevallie*) imperio se subdiderunt, id quod secundum tabulas et scriptores mense Oct. 1135 factum est (P. B. Bl. Pa [mense Sept.]. W. V. Vi. Du. M. Bl. Jo. J. Jc. Bo. Vc. St. He. Na. F. Robertus, Miraeus, Gregorius de Lande, Lucentius, Lubin, Perrus, Moroni, Camera; 1134: A. R. E. EM. SC. N. L. Lo. Si.; 1133: Marocco; c. 1140: Cibrario). Cui anno non obstant quae Manriqueus adfert, Altam-Cumbam, utpote paucis mensibus ante Oct. 1135 ortum, novo coenobio colonos dare non potuisse, praevarium cum Statuto XXXVII capituli generalis a. 1134 consti decretum sit, ut "nullus de abbatibus locum ad abbatiā fundandam accipiat, nisi prius sexaginta monachos professos habeat;" praeterquam enim quod de numero incolarum Altæ-Cumbæ non constat, minime id agebatur, ut novum prius coenobium competenti monachorum coetu impleretur, sed ut Fossae-Novae fratres, quum Cisterciensium ricendi formam perspicam non haberent, ab uno aliquotve Altæ-Cumbæ sodalibus accuratim legum et usum ordinis nostri experiri cognitionem illorum autem institutionem præclaro effectu non caruisse, Fossae-Novae historia a GERARDO, primi abbatis Cisterciensis, temporibus loquitur, piis, doctis et ad numeras ecclesiae dignitates promotis viris (quales tres cardinales CECASII fuisse perhibentur) superbiendis, imo D. Thomae Aquinatis morte et sepulcro sanctificatas,

have then contained the minimum of sixty monks required by the laws of the order before the foundation of another monastery could be undertaken. The inference is that the Italian Benedictine monks already at Fossanova remained and were placed under a French abbot named Gérard, who afterwards (in 1170) became abbot of Clairvaux itself.

The importance that Fossanova soon attained within the order is shown also by the fact that Godefroid, the favorite and secretary of St. Bernard, after being abbot of Clairvaux from 1161 to 1165, was placed in charge of Fossanova. If the bulk of the monks were at first Italians, this appears not to have continued to be the case. The journeys of St. Bernard into Campania in 1137 and 1138 were a powerful stimulus in the growth of the new institution, and the means of introducing colonies of French monks. The monastic buildings, however, indicate that it was not until after the middle of the century that it was found necessary to replace the old Benedictine structures with new ones. During the disastrous conflicts of the years 1157 and 1164-5, this region was thoroughly devastated, and beside the city of Piperno itself, burned in 1157, it is recorded that among other buildings the church of Sta. Maria de Charitate near Piperno, which appears to have belonged to the monastery, was ruined by fire.¹² Fossanova, also, may have been partly destroyed and its rebuilding date from then.

The old church of Sta. Potentiana was left in the midst of the new enclosure, probably as an oratory, and the new buildings arose in quite rapid succession during a space of well-nigh fifty years. From about 1150 to 1200 Fossanova grew until it merited, finally, to become the head of the order in Latium and Campania. All its colonies were then sent out: it founded the monastery of S. Stefano del Bosco in Calabria, in 1150; that of Valvisciolo near the neighboring Sermoneta, in 1151; that of Marmosoglio near Velletri, in 1167; that of Corazzo in Calabria, in 1173; and, in 1179, that of Ferrara in the Terra di Lavoro, not far from Naples, the last and greatest of its children. To it belonged also S. Salvatore, Sta. Croce and S. Nicolo at Roccasecca, Sta. Maria della Ripa near Piperno, Sta. Cecilia and S. Bartolommeo at Sezze, SS. Pietro e Stefano at Sermoneta, and Sta.

¹² *Chronicon Fossanovense*, apud MURATORI, *Scriptores Rerum Ital.*, t. VII. The author of the contemporary chronicle is Cardinal Giovanni da Ceccano. He belonged to the noble house of the Counts of Ceccano, three of whose members, monks at Fossanova during the XIII century, became cardinals.

Maria delle Canne at Sonnino—all neighboring towns. In 1214, the monastery of S. Pietro di Tuezolo, near Amalfi, later a convent of the Capuchins, was made *filia Fossae-Novae*, and in 1223 became a full monastery of the order, under its first abbot *Nicolaus de S. Germano*, from Fossanova.¹³ It also owned, throughout this region, a great number of granges, according to the custom of the large Cistercian establishments: in them a part of the lay-brothers lived and attended to the interests of the monastery's large and varied property. It is reported that, at this time, over 800 monks resided in Fossanova and its granges. This must be an exaggeration, for in Clairvaux itself there were but 700 monks at the time of its greatest prosperity, in 1154, the date of St. Bernard's death. There is better ground for the other statement, that when the abbot of the sister monastery of Casamari requested the presence of a large number of monks from Fossanova, on the occasion of a ceremony, excuses were made because, on account of sickness, only three hundred monks could be sent.¹⁴

The abbots of Fossanova wielded considerable influence not only in ecclesiastical but often also in State affairs, and it became the custom for the popes of this time to make use of Cistercian abbots in diplomatic matters. Thus, Abbot Jordanus was made a cardinal in 1188 and sent on a political mission to Germany. Jongelin (*op. cit.*, l. VII, p. 79 *seqq.*) gives a list of thirty abbots and other famous members of this monastery—cardinals and other prelates.

In 1179, when Frederick Barbarossa did penance for his long and bloody opposition to the papacy, during which so many monasteries had been burned and plundered, he made Fossanova the especial object of his bounty, endowing it with munificent gifts which came opportunely to aid in the reconstruction of its buildings; and on his death-bed he expressed the wish to be buried in the Cistercian habit. The emperor is regarded as a great benefactor of the monastery. As a proof of the importance of the favors received from Barbarossa, Valenti-Magnoni reports the following inscription as existing in the mosaic-work over the church door:

¹³ There is a dispute among authorities as to whether this monastery was placed in 1223 under the direction of Fossanova or of Chiaravalle: JANATSCHEK, *op. cit.*, p. 225.

¹⁴ PACCARASSI (*op. cit.*) makes these statements without bringing forward any arguments in their support.

FRIDERICUS I. IMPERATOR
SEMPER · AUGUSTUS
HOC · OPUS · FIERI · FECIT¹⁵

In 1187, the monastery had become so prosperous that Abbot Jordanus was able to purchase, from Lanterius, Frederick's administrator in Campania, the castles or burghs of Lariano and Castro, in order to hand them over to Clement III.¹⁶ The crowning event in this the formative period of the monastery's history was the visit of Pope Innocent III on June 19-20, 1208. This took place during the pope's triumphal journey through Campania, including Anagni, Ceccano, Piperno, Fossanova, San Lorenzo, Casamari, Sora, etc. The *Chronicon Fossanenae* (ap. Muratori) tells us: *Ad auram post meridiem Dominus Papa cum omnibus ivit ad monasterium Fossanenae, solenniter cum processione receptus, in refectorio cum conventu coenavit. Feriâ quarta clarente die Dominus Papa dedicavit altare majus Ecclesiae novae praedicti monasterii.*¹⁷

The dedication of the church in 1208 does not imply that it had not been finished for some time: it was a mere incident in the trip, apparently unlike the ceremony by which the twin-church of Casamari was dedicated in 1217, when Pope Honorius seems to have made this the main reason for coming from Rome with his entire court.

I shall not attempt to follow the history of Fossanova any further. Like all Cistercian establishments, it suffered from the rise of the Franciscan and Dominican orders in the XIII century, although its decadence did not set in until later, especially in consequence of the pestilence of 1348. Then it had, in the following century, its commandatory abbots. Among them was Peter, Cardinal Aldobrandini, nephew of Clement VIII, who restored the abbey between 1595 and 1600. Its reputation continued to the end. In a bull dated 1725, Benedict XIII accorded to Fossanova the first honors after Monte Cassino. In 1795, Pius VI decided to transfer the monastery to the reformed Cistercians, the Trappists of Casamari. The revival that ensued was short, for it was among the monasteries closed by order of Napoleon I. Its prop-

¹⁵ This inscription no longer exists: it must have been in that part of the mosaic-work in the tympanum of the main portal whose cubes have now entirely disappeared, having been originally enclosed in an oblong marble band.

¹⁶ MOTTE, *Die Baukunst des Mittelalters in Italien*, p. 691.

¹⁷ For the source of this quotation see Note 12. The armed escort that accompanied the Pope was commanded by the then Count of Ceccano.

erty was confiscated, and it was completely deserted in 1812. Between that date and its final suppression it was colonized twice from the Certosa of Trisulti.

DESCRIPTION OF THE MONASTERY.

The site in the heart of the Volscian hills, the *Monti Lepini*, is one that suited Cistercian ideas. In ancient times the consular road from Rome to Naples passed near by, and on the same site Appius Claudius is said to have built the Forum Appii. The region was then healthier; but, in the Middle Ages, the uncovering of the low lands by the retreating sea formed the Pontine marshes on the other side of the hills. The monastery is built in low and marshy land on the banks of the river Amasenus, which flows southward and soon reaches the marshes in the neighborhood of Terracina. The consequent unhealthiness is a characteristic rather sought than avoided by the Cistercians, who brought under culture in every country of Europe immense tracts of land hitherto unused or sterile. All around were stretches of bad land and forests in need of reclamation at the hands of these industrious monks. Southward stretches the narrow marshy plain bordered by hills that obstruct the view of the dismal Pontine marshes; to the north and east the rugged hills rise and fall until they reach the long plain bordered on the opposite side by the Sabine hills, forming the highway to the kingdom of Naples. Four or five miles to the right is Piperno half hidden among thick olive groves; and further, on the left, rises Sonnino on its nearly inaccessible peak. Thirty miles to the west is Sezze, the ancient Setia, rising above the marshes on the border of the hills. The digging of the canal or *fossa* to carry off toward the sea the water that accumulated in these low lands, probably gave to the site its name of *Fossanova*.

GATEWAY AND ADJOINING STRUCTURES.—It was during the last days of June 1889 that I visited Fossanova, though familiar with its buildings from photographs which had been taken there by my order in 1887. The monastic buildings (PL. VIII-1) were once encircled by a high wall, but are now well-nigh entirely exposed to view. By its side flowed the river whose water was so necessary for running the mills attached to the monastery and for many other purposes. Approaching from the west, the main entrance is reached; a lofty structure that originally resembled, on a reduced scale, the fortified gateways of mediæval cities. It contained several rooms, in which formerly dwelt the

door-keeper or *portarius* and his assistant. Its outer arch is pointed, that facing the interior is round: they retain most of their original features. Passing through its massive archway a broad expanse is reached. On the right is a long, modernized building which may have originally been a granary and storehouse or a workshop. On the left, at right angles with the gate and quite near it, are two buildings which have partly preserved their architecture of the close of the twelfth century. This is especially so with the further of the two, whose walls of travertine with well-built windows and arcades gave promise of further interest within. Ten round arcades, now blind, were originally open and formed a porch with cross-vaults. The second story is still preserved, and rises in retreat from the porch: an old doorway led out on to the balcony over this porch. This building, as well as the other, was in the possession of the local land-owner, whose steward was then absent so that it was not possible to study the interior. I believe this to be a guest-house or *hospitium* (or *foresteria*), where strangers were entertained. The other building may have contained the abbot's residence and an oratory, such as it was the general custom to place near the entrance to large monasteries of the order. When guests arrived they were met by the abbot, who knelt before them and then led them to the oratory for prayer before conducting them to the guest-house. In the twin monastery of Casamari, the connection between the gateway and the hospice was even closer, for there, perhaps through lack of space, they are united in one large two-storied construction. With the exception of these out-buildings, as well as the hospital and the old church of Sta. Potentiana, which are still private property, the monastery is declared by the Government a monument of national importance and placed in the charge of an official guardian.

EXTERIOR OF THE CHURCH.¹⁵—The above unimportant structures

¹⁵ The monastic buildings of Fossanova are said to be first described by F. PAOLO SPERANDIO, *Sabina Sacra e Profana*: this description I have not read. A few lines are devoted to it in RICCI, *Storia dell' Architettura in Italia*. The two best descriptions are quite recent: that by PACCANASSI, often referred to, is useful on account of its historic data and some measurements: that by MÖHRER in his *Baukunst*, pp. 691-3, is more scientific; but he identifies Fossanova with Sta. Maria de Caritate, which was burned in 1164, and says (p. 682): *Das Kloster war nicht ganz vernichtet; der sehr bald begonnene Ergänzungsbau war bereits ziemlich weit vorgeschritten, als 1173 der erwähnte neue Graben angelegt ward, nach dem das Kloster fortan Fossa nuova hieß*. But, up to the time it received the name of Fossanova, the monastery appears to have been called S. Salvator de Miletu or in loco qui Meletum nominatur, as is shown

hardly detain the eye, for directly in front rises the body of the monastery, its left end formed by a church, perfectly well-balanced and symmetrical in its proportions, simple and yet rich in its details (PLATE I), showing at every point both a mastery of constructive laws and a skill in effective details made subordinate to the general plan; a church not Italian but French both in conception and in execution. Like all the other buildings in this group, it is constructed throughout of carefully-quarried and well-joined blocks of fine travertine stone, the favorite material of the Cistercian builders in this region. They everywhere used the local stone, and only when forced to do so, apparently, did they make use of brick, either wholly as at Chiara-valle di Castagnola, or in part, as at S. Galgano near Siena.

by the donation of the year 1028 (VALLE, *St. di Pip.*). Further on (p. 691), Mothes returns to Fossanova: 1187 war Fossanova bereits ziemlich vollendet, sehr mächtig und reich, so dass Abt Jordanus in diesem Jahre dem Bailiff Lanterius aus Mailand, der für Friedrich I Campanien verwaltete, die Rocca von Lariano und Castro abkaufen und dem Papst Clemens III übergeben konnte. Jordan wurde Cardinal, ging 1188 als Legat nach Deutschland, kam 1189 zurück und vollendete trotz aller Kämpfe, Plünderungen, Brandschätzungen, etc., mit welchen Campanien in den Kämpfen Heinrichs gegen Tancred heimgekehrt wurde—seine Kirche Sanctæ Mariæ Fluminis de Ceccano, so dass sie am 25/8, 1196 feierlich consecrirt werden konnte.

Here, again, Mothes makes a grave error: he identifies the church of Sta. Maria near Ceccano with that of Fossanova, and applies to the latter the long description of the consecration of the former in 1196 which is given in the *Chronicon Fossanovæ*? But Sta. Maria near Ceccano, not on the river Amasenus but the larger Trevis or Tolerus and many miles distant from Fossanova, is still in existence. I visited and photographed it during the past summer, and shall publish it in this series. Consequently, Mothes has no foundation for dating the finishing of the church of Fossanova in 1196.

Mothes continues: *Einzelne Theile der Kirche und des Klosters waren auch nach der Brandschätzung von 1164 brauchbar, so besonders der Untertheil des Ostgiebels mit 5 runden Blendbögen zu ebner Erde und einem breiten Rundbogenfenster darüber, in welches beim Umbau ein ziemlich ungezeichnetes Radfenster eingesetzt ward. Auf Tafel III ist nur die Südecke dieses Ostgiebels rechts am Rand sichtbar, darunter aber ein altes Stück vom Krenagang, von dem auch der ganze Westliche Flügel (Taf. III im Hintergrund) stehen blieb. Während diese älteren Theile in Ziegel ausgeführt sind, wurde alles Neue in Quaderm construiert.*

The first point here made is that the fire of 1164 (which burned Sta. Maria de Charitate!) spared the lower part of the square apse with its four arcades as well as a part of the old cloister. These are said to be built of brick. I do not think that brick is used in the cloister: I am sure it is not in the apse. In my opinion, the apse was built all of a piece: the argument that the rose-window was opened later in the old round-headed window of the apse is groundless, for in early French transition it was the rule to open them in this way. The only architectural plate given by Mothes (Tafel III) is a highly-colored view of the open cloister with one side of

The church is cruciform in plan; over the intersection rises an octagonal dome-tower, otherwise its external construction is the exact counterpart of its internal forms. The central nave has twice the height and more than twice the width of the side-aisles, and it overshadows them even more completely than in the average French church of the period. This is owing to the absence here of the two towers that rise on the façade above the side-aisles in French transitional and Gothic buildings. The Cistercians were forbidden by the

the church on the rt. and the arcades of the new cloister on the lt. It contains a fatal error which is paralleled in the text. The relation of the church to the cloister is entirely wrong, and the south arm, instead of continuing along the side of the church, is broken where the transept is supposed to begin, and in the latter a developed Gothic door and window are interpolated. In reality, the entire four sides of the cloister remain substantially from the early period: only the vaults and columns on the north side were replaced.

In speaking of the octagonal lantern on the central tower and the similar pointed covering of the pavilion in the cloister, Mothes sees here a Norman influence: *Ein Vergleich mit den Thürmen von Trani, dem Grab des Bohemund, einigen Tabernakeln jener Zeit und Gegend genügt zum Beweis, dass hier normannischer Einfluss wirkte, welcher Beweis noch dadurch verstärkt wird, dass in der Normandie und in England einzelne Anwendungen desselben Princips vorkommen, während in Südfrankreich, dessen Einfluss auf Italien ja so oft betont wird, mir kein Beispiel bekannt ist.*

This Norman influence is seen by him with greater probability in the shafts and arches of the new part of the cloister: *Auch die gestelzten Spitzbögen des Kreuzganges erinnern in ihrer Profilierung, noch mehr aber die sie tragenden Säulchen durch ihre verschieden verzierten Schäfte an Monreale, etc.*

The remainder of Mothes' text will be quoted in notes on the chapter-house, portal, façade, etc. I shall notice only one further judgment of his. He sees "Lombard influence" in various details, such as the foliage from which the ribs spring in the chapter-house: he thinks its transverse arches also are "purely Romanesque:" he considers the profiles of the main portal to be "German Gothic:" the rose-window is "mixed Norman and Lombard." All this is according to the German method of fancying the most intricate and impossible situation. The architects of the transition were not, as our American architects often do at present, culling what they wanted from all the various styles then known. We may be thankful that they had some unity of style. Let me dispose of these points *seriatim*. (1) In general, all the forms and details to which he assigns these four separate origins are to be found in French monuments of the XII and XIII centuries. (2) The so-called "Lombard" foliage in the chapter-house is found in early French especially Norman Gothic, and in many Cistercian churches, for example, in Germany. (3) The so-called "Romanesque" transverse arches are characteristic of French transitional buildings: Mr. Mothes will also find them imported into Germany in such typical transitional buildings as Limburg (1213-50) and Gelnhausen (parish church, c. 1220-50). (4) The claim that the profiles of the main portal are "German Gothic" is extremely amusing. It was probably suggested by Abbot Jordanus' visit to Germany in 1188. No German building in existence before 1250, to my

statutes of the order to erect any towers save a low one over the intersection.¹⁹

The façade at Fossanova, therefore, is simple and follows the lines of the roofs and side-walls. In its upper story, limited by the lines of the gabled roof with its decoration of dentils and a cornice-strip below, is an eight-sided *oculus* or *œil-de-bœuf*, which admits air and light into the space between the vaults and the rafters of the roof. In the upper part of the central section we notice the presence of a small crown-like aperture, which, according to Paccasassi's ingenious conjecture, is a memorial of the munificence of the Emperor Frederick Barbarossa. But almost the entire space is occupied by a large wheel-window²⁰ of effective and symmetrical design, partly let into the façade, partly standing out from it, while around it is a false arch whose mouldings partly appear on the inner side of the façade. The interest of this feature is the greater, independent of its intrinsic symmetry and beauty, from the fact that it appears to be anterior to the year 1208 or

knowledge, has any similar system of profiles. Germany was the last country in northern or central Europe to adopt Gothic mouldings. Those of Fossanova can be paralleled in contemporary French or English buildings. (5) Finally, as to the rose-window, the Normans appear not to have employed it at all; so, only Lombard influence is a possibility.

There is a natural tendency, shown in many passages of Mothes, to manufacture a German influence over Italian transitional or Gothic buildings. The Italians were slow in adopting Gothic forms, it is true; but, such as they were, they were quicker about it than the Germans, whose transitional period lasted until the latter half of the XIII century. It is therefore very evident that, when Mothes speaks of German influence over an Italian transitional building of between 1170 and 1225 or a Gothic church of between 1225 and 1260 or 1270, he does not adduce examples and proofs because he cannot. Supposing a form or detail in an Italian-Cistercian building to be found at the same time in a German-Cistercian edifice, for example at Maulbronn, it would be absurd to say it was of German origin, because both are French.

In fine, Mothes adduces no facts to contradict the position, that the architecture of Fossanova is not purely French, with the possible exception of the late arm of the cloister.

¹⁹ It is possible that the dome-tower over the intersection was built or rebuilt later than the body of the church. It is well known that according to the Cistercian laws, afterward relaxed, only wooden towers were at first allowed. When the tower was constructed, substantially as it was before the earthquake, the ribs may have been made in the vault that supported it.

²⁰ A distinction should be made between a *wheel-window* formed on the principle of spokes radiating from a centre, and a *rose-window* made up of circles and short arches imitating the outlines of the leaves of a widely expanded rose. The terms are usually employed indiscriminately.

may belong even to the closing years of the XII century, and consequently antedates nearly all of the known rose-windows of similar style. In fact, I have yet to find one of so pure a Gothic style as early as this, even in the Ile-de-France. If it were possible to give here a comparative table of drawings of wheel- and rose-windows of the close of the XII and beginning of the XIII century, two results would be plain: (1) the gradual development between 1150 and 1200, by the Cistercians, of the wheel-window as the main feature of the façade; and (2) the analogies between such developed Cistercian windows as this of Fossanova and those of the early Gothic cathedrals.

The simpler Cistercian form of wheel out of which this grew is exemplified near by at the monastery of Valvisciolo founded from Fossanova in 1151.²¹ This plain heavy church, with its simple square piers and low unribbed cross-vaults, bears upon its face the date of its construction, between 1151 and about 1170; so does the plain façade with a single round-headed doorway. One would be inclined to ascribe to a later date the fine wheel-window, were it not that it is so evidently far earlier in its forms than that of Fossanova. It has twelve instead of twenty-four spokes or radiating colonnettes, and the round arches they support do not, so much as at Fossanova, lose their circular shape in the point formed at their intersection: the entire work is heavier in its proportions and less delicate in the execution of details. An almost exact copy of the window at Valvisciolo is seen in another monastic church of this region, *Sta. Maria de Flumine* near Ceccano, which was dedicated in 1196, being then already finished. Other Cistercian examples may be found at Casamari (1151-1217), San Galgano near Siena (1201-48), *Sta. Maria* at Ferentino (1225-50), and Monte l'Abate near Perugia (about 1200-25), which will be illustrated in succeeding papers. The most interesting, because its early date confirms the age of that of Valvisciolo, is in the façade of the Cistercian church of Chiaravalle di Castagnola near Ancona. Its date, according to two inscriptions, is between 1172 and 1196, and its wheel-window is in every detail the counterpart of that of Valvisciolo.

The wheel of Fossanova has a diameter of 5.50 met., and is formed of a hub comprising twelve arches of irregularly circular shape, which sustain the thrust of twenty-four slender colonnettes that radiate toward

²¹ The buildings of Valvisciolo—church, cloister, chapter-house, refectory, etc.—will be illustrated in another article; and a description of *Sta. Maria* at Ceccano will be added.

the circumference, and, on reaching it, every other one is joined together by moulded round arches so intersecting one another as to produce the effect of a series of pointed arches, and this effect is increased by the use of independent frankly-pointed sub-arches joining each shaft. These colonnettes have no bases, and their capitals are delicately foliated after the style of the advanced transition. An irregular tooth-ornament decorates the moulding that immediately encloses the arches. The outer mouldings of the circle are sharp, bold, and projecting, and in their grouping and outline are similar to those of the portal below.

A comparison with transitional and early-Gothic windows in France is interesting. The circular form was not used at all until late in the transitional period, and then only in the Ile-de-France and a few buildings of Champagne. As soon as it there comes into use it develops in two general types. (1) The first is formed of a series of circles and low arcades on the principle of the rose: early examples are found in the cathedrals of Nantes (c. 1180-95), Laon (c. 1191-1210), and Chartres (c. 1220-30). (2) The second is in the shape of a wheel with lines radiating from a centre. In the latter class, with which we are concerned, the form appears in embryo in such small and secondary roses as that of the west front of Senlis (end of XII) and then becomes fully developed in the great window of the main front of Notre Dame in Paris (1220-30) and, later, in those of the cathedrals of Reims (after 1245) and Amiens (c. 1238). These, and others like them, are but the logical development of the type of Fossanova. In fact, at Notre Dame, which has the simplest of the group just enumerated, there can hardly be said to be any advance on Fossanova: perhaps there is even a loss of harmony in the proportions, through the enlarging of the hub. The main change is the use of trefoil arches. Here, also, there are, as at Fossanova, twelve inner and twenty-four outer arches, but the intersection is entirely instead of partially obliterated: the encircling mouldings do not project, as the window is entirely set into the front wall. It is surrounded by a projecting round arch resting on engaged colonnettes, in a way to show how closely the two forms were connected by architects of the transition. A simpler form of the same arch is found at Fossanova around the rose-window of the apse, and inside that of the façade.

It is possible that a careful study of this important feature of Gothic architecture would show that it was adopted from transitional Cistercian churches into the general scheme of Gothic architecture. In this

case, I believe its origin may be traced further, and that the Cistercians may have borrowed it from Lombard architecture. The Cistercian churches in France built at the close of the XII century, such as those of the monasteries of Senanque, Thoronet and Silvacane, do not seem to have made use of the wheel-window. On the other hand, there are strong arguments in favor of the idea that, in Italy itself, the simple *oculus* of the Latin basilica was developed into the wheel-window, being at the same time associated with the idea of the wheel of fortune (S. Zenone at Verona), a symbol of human life. Examples during the XI and XII centuries are not uncommon in Italy. Large and elaborate wheels are in the façades of S. Zenone at Verona, S. Rufino at Assisi, Sta. Maria Maggiore and S. Pietro at Toscanella, S. Ciriaco at Ancona, and the cathedral of Modena. A comparison of these with the earliest French examples (none of which are earlier than 1175) leaves no doubt as to the priority of date of the Italian monuments. In this connection, it is interesting to notice the close resemblance between the wheel-window of Fossanova and that of the cathedral of Modena (c. 1150-80), whose twenty-four colonnettes, however, rest squarely upon a strong inner circle.²²

The lower part of the façade of Fossanova is divided into three sections by the two pier-buttresses that rise as far as the gable roof. Two small round-headed windows are placed, one on either side, above the main portal. As in the generality of Cistercian churches, according to the rule of the order, there is but one doorway (PLATE II), whose numerous mouldings are in part recessed in part projected beyond the main wall. The pointed arch is surmounted by a gable of proportions similar to that of the roof above, with a like decoration of dentils. Enclosing the gable are wall-ribs forming a pointed lunette: similar lunettes are formed on the faces of the side-aisles, and the condition of the construction around and between them shows that a porch was here projected, or executed and at some time destroyed. We still see the first stones of the pear-shaped diagonal ribs of its vaults, similar, on a reduced scale, to those in the chapter-house, and the spring of the

²² I am not aware of any treatment of the origin, development, and various kinds of wheel- and rose-windows. VIOLETT-LE-DUC has an interesting article in his *Dictionnaire raisonné*, vol. VIII, p. 39, *sup.*, but he confines himself strictly to France. The subject seems one of real interest. In England the form was not used; neither was it in the greater part of France or Germany. The suggestion of an Italian, and more especially Lombard, origin for the circular window with tracery is merely tentative, as I have not as yet sufficient material to prove it satisfactorily.

plain but heavy double transverse arches that separated the three vaults, similar to those in the interior of the church. From the torn and ragged state of the masonry, and the fragments of the vaults buried in the façade, there seems hardly any doubt that the porch was not merely projected but actually constructed, and, from the shape of its ribs, was evidently the latest portion of the church. Such a porch we find at the neighboring and almost contemporary Cistercian monastery of Casamari, and from it we can judge the porch of Fossanova to have been open and formed of three arches, two narrow pointed openings corresponding to the aisles, and a wide central opening which, at Casamari, is circular.

The doorway is almost as important in its way as the wheel-window, and deserves careful study. Its inner diameter is 2.60 met.; its outer diameter about 6 met. The pointed arch is extremely low, and even less removed from the circular form than such earlier doorways as those at Chartres (*c.* 1140). The uprights are simple and have no Gothic features in the three recesses, each containing a slender shaft. The interest lies in the elaborate mouldings they support, whose profiles can be studied in the phototype in PLATE II. In the doorways of early-French cathedrals sculptured figures were so largely used to replace mouldings that it is not easy to find examples similar to this, and perhaps closer resemblances may be traced in early-English work. The mouldings are divided into four groups: their delicacy is such as often to require the most careful examination. Their profiles are in the pure Gothic style, and it is surprising to find it at so early a date as before 1208, and especially in Italy. Beside the corresponding portal at Casamari, which is even slightly richer, the only other Italian portals that seem to equal this in excellence are the two well-known ones in the upper and lower churches of S. Francesco at Assisi, executed nearly a half-century later.

Supported on two consols is the lintel of the doorway, every inch of which is covered with a pattern inlaid in mosaic cubes, the design of interpenetrating circles being borrowed from the church pavements so general at this time, especially in the Roman and southern provinces. In the middle was an oblong space, once full of mosaic cubes. It probably contained the inscription of the Emperor Frederick I already mentioned. Above the lintel the tympanum is filled with a semi-wheel with eight radiating colonnettes supporting intersecting arches like those of the great wheel-window above. Both background and

arcades are covered with the most delicate decoration in mosaic, now sadly injured. This mosaic-work appears to have proceeded from the hand of a Roman artist or decorator (called in by the Cistercians), and to be a concession to local taste, as the order was averse to the use of color in decoration. It is well known that several families of Roman mosaicists and sculptors worked in this region at about this time: that of the Vassalletti has left traces at Segni and Anagni; that of Paulus at Ferentino; that of the Cosmati at Anagni. In this connection it is interesting to instance the doorway of the cathedral of Civita Castellana, the tympanum of whose main doorway is occupied by a semi-wheel of nearly the same design and decoration in mosaic. The date is about 1180, and it is a signed work by two of the Roman artists of the school of Cosmas, Laurentius and his son Jacobus. The principal difference is, that both tympanum and arcades are round instead of pointed. In Rome itself there is proof of the coöperation of the Roman Schools and the Cistercians, and of their mutual influence, in such buildings as Sta. Sabina, Sta. Croce, San Sisto, *etc.*

The other external features of the church can be dismissed without much comment. A narrow and simple round-headed window, as in early French transitional buildings, is cut in each bay, both in nave and aisle, and opposite each internal pier the thrust is received by a rather heavy buttress-strip, quite devoid of decoration save string-courses at top and bottom of both main and side aisles. The octagonal dome-tower consists of two stories, each lighted by eight double windows, surmounted by a narrow lantern. It is a modern reconstruction, dating only five or six years back, and said to vary from the model only in the greater height of the lantern. It had been several times injured by lightning, and the last time so severely that, when the Italian Government declared Fossanova a national monument, it was necessary to rebuild the tower to prevent damage to the church. It had been previously rebuilt or repaired in 1595. In 1157, the Chapter General of the order forbade the building of a stone tower over the intersection—the only place where a tower was allowed—and prescribed that they should be of wood and low: it was not until 1274 that this restriction was removed.²² The tower at Fossanova is but one of many instances in which this rule was disregarded.

The square apse is plain and has merely an *œuil-de-bœuf* under the gable, and, below, a small rose-window of eight divisions set in the

²² DORME, *op. cit.*, p. 27.

curve of a round-headed false window whose colonnettes rest upon a projection corresponding to the level of the vaults of the aisle. Just above the ground-level spring three circular blind arches. These two lower stories of the apse are thought by Mothes to remain from an earlier building burned in 1164: this supposed fire is also thought to have spared part of the cloister. In Note 18 are given reasons which seem to show that there is no ground for such an opinion. The church was built at one time and there are no traces of a fire.

INTERIOR OF THE CHURCH.—The rugged and stern simplicity, the opposition to the superfluous and the showy, exemplified in the life and the works of the Cistercians—this is the ideal that is carried out in stone in the massive and plain interior (PLS. III, IV). It embodies the spirit of pure constructiveness, it has unity, it has simplicity and grandeur; more subtle is the charm of the symmetry and harmony of all its parts. There are no paintings on the walls, and no sculptures, for they were forbidden by the rules of the order; there is no mosaic pavement, for against any such the ruling was so strict that the Abbot of Gard was forced to tear up one he had laid down in his church at about this time. The walls, therefore, are without decoration, and this lack is not compensated by architectural richness. In Cistercian churches there was no need, for the use of the congregation, of those triforium-galleries that form so important a feature of the transitional buildings of the Ile-de-France; and therefore we do not find them at Fossanova. The small plain round-headed windows that occupied a corresponding position, between the summit of the stone vaults and the slanting roof, have been closed, but their traces remain above the main arches, and in the twin church of Casamari they are still open. As compared with the different styles of interiors that had hitherto been seen in Italy, this differs radically on almost every point: in its high narrow nave, its heavy and elaborate piers, its engaged members leading the eye upward at every bay, and, in general, its structural effect. It must have exercised the strongest influence upon Italian artists: that it did, can be proved by buildings still extant.

Further points of difference from the contemporary transitional churches of the Ile-de-France are—piers in place of columns or of an alternation of columns and piers; somewhat heavier transverse ribs; the absence of arch-mouldings, and, in general, a greater simplicity of profiles; a somewhat greater width of the central nave, as compared to its height and to the width of the side-aisles; a larger

proportion of solids to voids, a Romanesque characteristic retained because no flying buttresses were yet introduced to receive the thrust of the vaults.

The cruciform ground-plan is simple (PL. VIII-2): it is the one usually adopted by the Cistercian monasteries founded from Clairvaux and Morimond.²⁴ The apse is square and composed of a double bay; a form which is characteristically Cistercian and was one of the features adopted from them by the Franciscans and Dominicans. On either side extends a transept, containing in each wing two oblong side-chapels: this also is to be found in almost every church of the order, although occasionally the number of chapels is increased to six. This peculiar though simple arrangement of apse and transept was first pointed out by M. de Montalembert, in 1851, as being a Cistercian trait.²⁵ This is especially true of the churches of monasteries that carry back their genealogy to Clairvaux and Morimond, including the greater number of monasteries of Italy and Germany. The reason for the use of such a form may have been both theoretical, from a love of simplicity, and practical, from a desire for economy. Its wide adoption seems to have been caused by the fact that both the above parent monasteries originally had square-apsed churches. On the contrary, Pontigny, whose church had a semicircular choir with radiating chapels more in accord with the Gothic ideal, favored the building of churches on the same model, such as Sta. Maria di Falleri (1143) and San Martino near Viterbo (1207), which were, with San Sebastiano near Rome, the only foundations of Pontigny in Italy. But the influence of Pontigny in favor of radiating chapels seems to have been felt in such churches as San Francesco at Bologna (1237-45), which contests with San Francesco at Assisi the honor of being the first example of Northern Gothic erected by the Franciscan order; such, at least, is Thode's opinion (*op. cit.*, p. 334). In Germany, on the other hand, while the square apse was retained, an attempt was usually made in the churches of the end of the XIII and of the XIV century to add a richness more consonant with the Gothic style by the multiplication of apsidal chapels grouped in various ways. Such

²⁴ This is all the more singular, since the plans of Clairvaux extant show a semicircular apse with radiating chapels. As the church was long ago destroyed we can only conjecture that the original apse, of the early XII century was square, and was replaced, in the succeeding century, by one of semicircular form, retaining the square chapels in the transepts.

²⁵ *Bulletin Monumental*, t. XVII.

was not the case in Italy, where the simple semicircular Latin apse was never much changed, even under Gothic influence. In adopting the square apse, no necessity was felt to change its simplicity. Of the more than a hundred churches built by the Franciscans and Dominicans in Italy during the XIII century, which I have had occasion to study in Central Italy alone, nine-tenths had the simple square apse of the Cistercians. From the great Sta. Croce and the beautiful Sta. Maria Novella it seems to have passed into Brunelleschi's consciousness, for it is this form which he adopts for San Lorenzo at Florence. In his *Franz von Assisi*, Thode gives some representative ground-plans of Franciscan churches of this Cistercian type and very correctly recognizes whence they were copied.

In England, with the spread of monasticism, the square apse became so popular that it finally was the prevailing form for the termination of all churches, and is now one of the most striking characteristics of English Gothic cathedrals. In fact, it is claimed that the square apse was used in England before the advent of the Cistercians. Two English churches are mentioned as having square apses erected during the last years of the XI century; these are the cathedrals of Old Sarum (1092) and Ely (1082-1100). This is considered by Willis sufficient proof that "we do not owe the square form of our English chancels to the Cistercian monks."²⁶ It is in harmony with the small artistic influence exerted by the Cistercians in their native land, that but few traces of this form can be found in France outside the churches of the order. However, among conspicuous examples are the transitional abbey-churches of La Règle, La Souterraine, and La Couronne, the church of Vernouillet and the cathedral of Laon.²⁷

It is, therefore, possible to trace the form of the square apse, with four or six square side-chapels in the transept, from the beginning of the XII to the end of the XV century. But can we go further back? Did the Cistercians, in their search after the simplest forms in archi-

²⁶ *Facsimile of the Sketch-book of Wilars de Honecourt*, published by M. J. B. A. Lassus, translated by Rev. Robert Willis: London, 1859, pp. 80-86. On pl. xxvii is the ground-plan of a church by de Honecourt described as "a square church which was designed for the Cistercian order." In connection with it is some interesting matter regarding the use of the square apse, and some correspondence of Mr. Willis with M. de Montalembert, the famous author of *Les Moines d'Orient et d'Occident*, with the English archaeologist J. H. Parker, and with Schnaase and Lassus.

²⁷ The square apse of Laon replaced, in the XIII century, the original semicircular end.

ture, invent it, or did they merely adopt it from previous buildings? A decided answer seems difficult. In Italy alone there would appear to be several examples previous to the Cistercians. The square apse of a semi-Byzantine church of the VI or VII cent. in Venice, San Giacomo al Rialto²⁸ would have had no influence, being in the form of a Greek cross and without side-chapels. In closer relationship stands the cathedral of Troina in Southern Italy, said by Mothes²⁹ to have been finished as early as 1080, whose square apse is flanked by square chapels. Doubtless, further search would secure other examples apparently anterior to the Cistercians, although the possibility of a restoration might always remain. Mention has also been made above of the claim of its use in England prior to the Cistercians.

Returning to Fossanova—the face of the apse is but slightly decorated; above is a small, eight-lobed rose-window with mouldings similar to those of the façade. It is framed by a strongly-marked round arch supported by engaged columns defining the outline of the recess. Below are three recessed windows corresponding to those on the exterior; they are now closed but may have been originally open. One of them, through some early restoration, was made pointed; the other two remain round-headed. Over the intersection rises an octagonal cross-vault, of domical shape, with an opening in the centre which communicates with the octagonal tower it supports. This vault is ribbed with both diagonal and longitudinal ribs of simple outline, which seem to indicate this vault to be later than the body of the church. The body of the church is composed of a wide and extremely lofty nave, flanked by low and narrow aisles, each formed of seven bays divided by piers. The measurements of the church, for the great part as given by Paccasassi, are as follows: greatest length inside, 64.50 met.; outside, 69 met.; greatest internal breadth, 29 m.; length of apse (int.), 12.40 m.; width of apse (int.), 8.90 m.; width of nave, between piers, 8.50 m., between axes, c. 10 m.; width of aisles between wall and piers, 3.50 m.; height of engaged pilasters supporting vaults, 20 m.; total height to vaults, about 26 m. A cross-section is given in PL. IX-1, and a longitudinal section in PL. IX-2. The relation of the width of the nave to its height is about as 1:3, a proportion nearly equivalent to the average in French buildings.

It seems singular, while the church is so far advanced in transition

²⁸ HÜBSCHE, *Altchristliche Denkmäler*, pls. 38, 39.

²⁹ *Op. cit.*, p. 524, fig. 133.

in certain points, that on the cardinal question of vaulting it should lag so far behind. The vaults of the body of the church, both nave and aisles, are unribbed and merely groined; it is only in the apse, which in Cistercian churches seems often to have been left to the last or to have been made over later, that we find ribs, whose introduction at Fossanova might therefore be in about 1200 or a trifle earlier. Still, though unribbed, these vaults are of an advanced design. They are sexpartite, being divided not only by intersecting diagonal groins but by a groin curving downward at its ends, at right angles with the axis of the church, while there is also, at right angles to this, a straight groin across the centre along the axis. This kind of vaulting was employed in the Norman churches of the twelfth century, all these groins being ribbed except that along the axis, thus forming the well-known sexpartite vault employed in the transitional and early-Gothic churches in France before the introduction of quadripartite vaults. The vaults are divided and framed by heavy transverse arches, double and pointed: they are low, and resemble in this respect those of some transitional Burgundian churches, as, for example, that at Souvigny, not to mention French Cistercian churches like Silvacane. This adds to their effectiveness. These double transverse arches are supported by a pilaster and a half-column engaged in the main wall: the pilaster rises from the floor and forms an integral part of the piers of the nave; while the engaged column ends, about half-way down the pier, in a *consol*, a peculiarity common to many Cistercian and a few other churches. The verticality of these lines is interrupted at two points by a simple cornice: the upper cornice frames the arches of the nave; the lower marks the spring of these arches and forms a simple plinth for their side engaged columns. The abaci of the supports of the transverse arches have the same profile, which resembles, though it is even simpler, those in the transitional churches of Mouzon, Senlis, and in other French churches. The presence of ribs in vaults of the XII century is considered to be a necessity if they are to be regarded as transitional vaults. All unribbed vaults are dubbed pure Romanesque. Leaving this question for a moment, let us examine the other characteristics of vaults of the transitional buildings of the Ile-de-France. They are separated by pointed transverse arches resting on engaged shafts: their wall or longitudinal ribs are also pointed: the vault itself is not quadripartite but sexpartite: it is also decidedly domical, for the key of the vault is considerably higher than the sum-

mit of either the longitudinal or the transverse arches: the masonry is twisted, because the wall-arch springs from a point above that of the transverse arch, and of the groins and their diagonal ribs. All these characteristics of advanced transition are present in the vaults of Fossanova, and the pressure is so well distributed as to render the use of flying buttresses unnecessary, although thick walls and heavy piers are still required.

There is a marked simplicity in the main arches of the nave (PL. III). They are totally devoid of external mouldings, and this point of difference between Fossanova and the transitional churches of the Ile-de-France is in harmony with the Cistercian dislike of the unreal and the artificial, and their love of constructional beauty. The necessary relief and play of light and shade is here, but it is given by the sub-arches supported on engaged columns. This feature might be thought to be of Italian origin, for it is to be found both in internal and external constructions of the earlier part of the century in various parts of Italy. Such are the interiors of San Zenone at Verona, in the north, Sta. Maria di Castello at Corneto, San Sisto at Orvieto, and of the churches at Toscanella in the States of the Church, and the porch of S. Erasmo at Veroli in the same region as Fossanova. It is, however, found in early-French Cistercian churches; such as Silvacane and Thérone, and is a feature too obvious to belong to any special school, being found, in fact, in the Romanesque buildings of every country. It lies at the base of the arch-mouldings of most of the contemporary constructions of the Ile-de-France, in which the corners are cut and decorated with torus-mouldings. A longitudinal section is given in PL. IX-1, a cross-section in PL. IX-2. The piers are massive and short for their height, if viewed in themselves, but standing in a perfectly harmonious relation to the entire structure: they are formed by the intersection of two parallelograms in each of whose faces a column is engaged. Their bases are simple but high: those of the engaged columns rise in a triple step, above which are Ionic mouldings. The capitals are of good proportions and of simple transitional floral design, almost every pair differing somewhat in details. With the exception of the over-curling knops at the corners and an occasional leaf in capitals that have a double row of leaves, the design is in very low relief and is almost entirely surface decoration. Many similar examples could be given from contemporary French buildings, but to one familiar with this period of architecture the parallelism is too evident to require demonstration. The main designs are given in PL. IX-3.

The view down the side-aisles (PL. IV) gives a different impression from that of the centre of the church, being more sombre and massive. It is more decidedly French, and one is reminded very strongly of Laon, and slightly of St. Leu d'Esserent, Souvigny, and Autun. Far heavier in proportion than those of the nave are the double transverse arches, owing to the lowness and narrowness of the aisles; more solemn and full of perspective is the long line of piers with their engaged columns rising from the ground. The low vaults are built on the same plan as those of the nave.

Although the church has been more than once restored, nothing has been done to change the structure: the principal alteration seems to have consisted in closing the three windows in the apse and the line of small windows in the nave under the clerestory. The date of these alterations may be 1595, when the tower and the high altar were thrown down by lightning and great damage was done to the entire structure. This is recorded by the following inscription on the first pilaster to the left:

HVIVS AEDIS MAIOREM PARTEM
TVRRIM SACRAM ATQVE ARAM MAXIMAM
ICTV FVLMINIS DEIECTAS
PETRVS CARDINALIS ALDOBRANDINVS
CLEMENTIS VIII. PONT. MAX. FRATRIS FILIVS
HVIVS MONASTERII PERPET. COMMENDATARIVS
RESTITVIT
ANNO SALVTIS MDXCV.

The ancient arrangement of the choir and the style of the campanile before it was overthrown, are described by Valle in his history.

In 1812 the monastery was deserted, in consequence of Napoleon's confiscations, and the church was turned into a stable for buffalos. On being given, in 1826, by Leo XII to the Certosa of Trisulti, the church was repaired and afterwards restored to worship in 1845, when monks were sent there from Trisulti: a considerable sum was then spent on the buildings. In 1874, it was declared a national monument, and since that time the central tower has been rebuilt and the church and monastery put in good repair.

NIGHT-CHOIR AND SACRISTY.—Before leaving the church we must mention two small chambers attached to the right arm of the transept, adjoining the monastery and communicating with both: one is the *coro*

della notte where the monks gathered to chant the service at night, the other is the Sacristy.

MONASTIC BUILDINGS.—Passing from the church to the monastery we find the following constructions of the early period to examine: (1) Cloister; (2) Refectory and its dependencies, such as kitchen, storeroom, wine-vaults or cellar; (3) Chapter-house and its annexes; (4) Dormitories for the monks and lay-brothers, the corridors and stairways; (5) Hospital or Infirmary; (6) Guest-house and Chapel of St. Thomas Aquinas; (7) Old Church of Sta. Potentiana; (8) Great Court with cemetery and garden.

CLOISTER.—At the corner of the nave where it joins the transept is cut a doorway through which, by descending a few steps, the N. E. corner of the cloister is reached. The two engaged columns in this doorway are divided in the centre by a triple moulding, as at Casamari. Another interesting round-headed doorway leads into a corridor from the E. end of the S. arm of the cloister; it is decorated with the Norman zigzag, and is thoroughly Romanesque.

The cloister is a remarkably perfect example. When Ricci wrote, nearly fifty years ago, his history of Italian architecture, he mentions the cloister as having a second story of the same style (Note 2). This no longer exists. It must have been remodelled at the time of the last restorations. There remain, on the second story, two fine pointed windows above the chapter-house; and the three round-headed windows on the north side belong to the refectory.

The lower story is still complete, though it is disfigured at points, on the side next the church, by the addition of heavy buttress-piers. The cloister is not exactly square: it measures 23.65 met. in length by 19.10 met. in width, and forms the centre of the monastery around which are grouped all the other buildings. It belongs to two distinct periods of architecture which are even more widely separated in style than in date. It was first built, toward the middle of the century, in a simple but refined style, comparable but superior to the latest part of the cloister at SS. Vincenzo ed Anastasio near Rome, whose date is presumably 1140 to 1150. At the close of the century, the south side was rebuilt in a rich architecture that reminds of some cloisters of the South of France and of Sicily; but even in this section traces of the old style remain in the main wall. The old sides (N., E. and W.) are covered with fine barrel-vaults interrupted by slight transverse arches. The arcades are composed of low round arches supported by coupled

colonnettes. The arches are narrow and entirely without mouldings. They are not divided into groups by external false arcades, as in some Cistercian cloisters in France of this period. The capitals are quite plain, none having any foliated design, and are surmounted by a thin abacus: their two principal types, shown in PLATE XI-2 are modifications of the cubic form, and were used by the Cistercians before they began (about 1150) to adopt foliage. The shafts also are plain and measure exactly one metre without their bases, which are a simple modification of the Ionic form and rather high in proportion: the diameter of the shafts is 17 cent., and they are raised upon a pampet about a metre in height. Attached to the w. side is a well, covered with a pavilion formed by four square piers supporting pointed arches. It is ancient, but of later date than the new cloister.

Of far greater interest is the newer south side, opposite the Refectory. An internal view is given on PLATE V. Its vaults are groined and separated by transverse arches delicately moulded resting on engaged columns which on the outside spring from the ground and on the inside wall, next to the refectory, rest upon consols. There are five bays: four open out onto the open court through four pointed arches supported by coupled colonnettes, while the central one has but a single wide round arch leading into a *tempietto* that formerly contained the fountain used for ablutions on entering and leaving the refectory. These bays are divided by heavy buttress-piers in which columns are engaged. Each one has a small opening or *oculus* in the wall, above the arcade, alternately octagonal and similar to a Maltese cross. The affiliations of this side of the cloister are varied. In the south of France, a similar style is to be found in the well-known cloister of Moissac, which Viollet-le-Duc gives as typical of the best Cistercian style of the close of the XII century: another example is that of S. Trophime at Arles. In Italy, the closest resemblances are to the Norman cloisters of Sicily, especially that of Monreale, which is contemporary. But, notwithstanding that these are among the most famous constructions of their kind, this one at Fossanova appears to me to surpass them all in beauty and symmetry. The combination of strength and massiveness with elegance and profusion of rich details is somewhat unexpected in a Cistercian building of this date.

The vaults are oblong but unribbed, but this does not appear to be any indication of an early date, for the details of the construction are advanced. The transverse arches differ in outline from those of

the chapter-house, and consist of three tores defined by simple concave mouldings, all springing from a solid floral bed that surmounts the abacus of the supporting engaged columns (*Fig. 1*). These supports have capitals of bold and schematic forms, in contrast to the highly worked shafts of the arcades—a contrast in accord with their different position, use, and size. The projecting mouldings of the small arches remind of those on the outside of the corresponding arcades at Monreale and the Eremítani at Palermo, though more detailed and Gothic. They are divided into two sections; the inner ending in a point over the abacus, the outer terminating in a rosette-consol above, except where it ends in a lower consol, next to the transverse arches. The gems of the cloister are the 24 free-standing colonnettes (besides which there are 28 engaged shafts). PLATES V, XI-2 will show the delicacy and artistic taste shown in the composition and execution of both shaft and capital. Hardly any two are alike. Some have been sadly injured both in capitals and bases, a danger to which they were the



FIG. 1.—Cloister.
Section of transverse arches.

more exposed on account of the sharpness of the profiles and the extreme projection of knops, flowers, and leaves. All the decorative forms are mostly Gothic. A number of the shafts are composed of four colonnettes engaged in a central mass which is sometimes plain, sometimes decorated with sharply projecting *dents de scie*, or with flowering creepers whose leaves and flowers then encircle in more exuberant fashion the capital itself. At times, the four engaged shafts are straight, at times, they twist around the central mass in the middle section, at times, the twist extends from capital to base. Greater elegance and apparent length is given to the shafts in this side of the cloister by the lesser height of the bases and the close union of the shaft with the capital which is but its gradual expansion.

Great decorative use is made of colonnettes set against rather than engaged in the piers. This is done with especially happy effect in the pavilion or *tempietto* that is entered from the middle bay. It is square in form, measuring five metres. Its three other sides are formed by two round arches sustained in the centre by a single heavy column, while at the four corners are square piers against which colonnettes are set in pairs to support the arch-mouldings. These arches bear a high conical roof that supports a lantern consisting of eight colonnettes on which rests a small conical roof (PLATE X): a similar arrangement

crowns the summit of the octagonal tower over the church. Regarding the pavilion, Mothes remarks (*op. cit.*, p. 692): "It must also be noticed that this roof is not placed over a vault but forms itself the vault. A comparison with the towers of Trani, the tomb of Bohemund, and some ciboria of the same period and region, is sufficient to prove that Norman influence was here at work, and this is strengthened by the fact that in Normandy and in England several applications of the same principle occur, while in Southern France, whose influence on Italy is so often proclaimed, I know of no examples of it." This quotation embodies Mothes' principal argument for the presence of Norman influence at Fossanova. The fluted column opposite the entrance, with its capital, and the shaft on the right, are restorations made in 1600 by Cardinal Aldobrandini, according to this inscription carved in a stone let into the pavement: PETRVS CARD. ALDOBRANDINVS | CLEM. VIII P. M. EX FRATRE NEPOS | PERPET. COM-
ENDATARIVS | RESTAVRAVIT | AN IVB. M. D. C. At the time of this restoration, the original fountain was replaced by the present table, and the shafts supporting the transverse arches of the cloister near the entrance were replaced by the present octagonal shafts. The use of round arches in the pavilion is rather unexpected, and is doubtless owing to the form of roof they support.

REFECTORY.—Opposite the pavilion is the entrance to the Refectory, through a fine large doorway flanked by two small windows and reached by a few descending steps. It is a lofty hall, but rather dark and gloomy owing to the stern plainness of its architecture and the closing of many of its windows (PLATE XI-1). It is about 30 met. long by 20 in width, and projects far beyond the body of the monastery. Its plain gable roof is supported by five heavy pointed transverse arches, plain and without any mouldings. With one exception these arches rest on engaged pilaster strips that terminate in corbels. It was originally lighted by sixteen windows, but all but ten are now closed up. Paccasassi (*op. cit.*, p. 12) speaks of records that mention large tables made of walnut and supported by marble columns, which filled the hall. The pulpit also has disappeared. According to Valle (*op. cit.*) it was of marble with a decoration in mosaic, and we may suppose it to have been executed by the same Roman artist who decorated the main portal with mosaic-work. The semicircular base upon which the pulpit rested still remains, projecting from the right wall, and consists of a remarkably rich group of projecting mouldings in boldly over-

hanging series. It is reached by a staircase. The windows are all round-headed and simple. On the right, however, encircling two windows, are two wide and heavy arcades with three groups of mouldings that relieve the bareness of the interior. There is some delicate work in the capitals also, though the foliage is slightly more primitive than in the cloister and even than in the church.

The date of the Refectory is considerably later than that of the old cloister. That it is slightly posterior to the Hospital is shown by the greater detail in its supporting pilaster-strips and the foliage of its capitals, even though the Hospital have pointed instead of round-headed windows. It was probably built between 1160 and 1170, and only slightly antedates the church, where similar capitals are employed.

Next to the refectory are the kitchen and the *calefactorium*, where the monks came to warm themselves in winter, as no fires were allowed in the dormitory or the other parts of the monastery.

CHAPTER-HOUSE.—The Chapter-house is entered through a simple round-headed door in the centre of the western arm of the cloister: its floor is reached by descending four steps. On either side of the door are two simple round-headed windows separated merely by a short colonnette. Both door and windows belong to an earlier period than the hall itself, and form part of the early cloister, as noticed above. The Chapter-house is nearly square, measuring 10.70 met. in length and 11.45 in width. Its vaults are supported by two piers or, more exactly, bundles of shafts, which divide it into six compartments. Opposite the entrance are three good-sized pointed windows, one opposite each vault. A stone seat for the monks encircles the whole interior and belongs to the original construction.

This interior is, in every detail, a perfect example of early Gothic, and is in this respect by far the most important part of the monastic buildings. Aesthetically, it is worthy of high praise for harmony of line and combined delicacy and boldness of effects. The two piers are composed of eight shafts, each with a diameter of 17 cent., grouped around a central mass whose octagonal shape is concealed on four of its angles by minute shafts that fill the interstices, while the other corners are left exposed. This arrangement gives an air of lightness, increased by the fact that the shafts are but slightly engaged in the mass (*Fig. 2*). Of these shafts four support the diagonal ribs, two the transverse and two the longitudinal arches: they measure 2.35 met. in height, without bases, and their capitals are 50 cent. high. A sym-

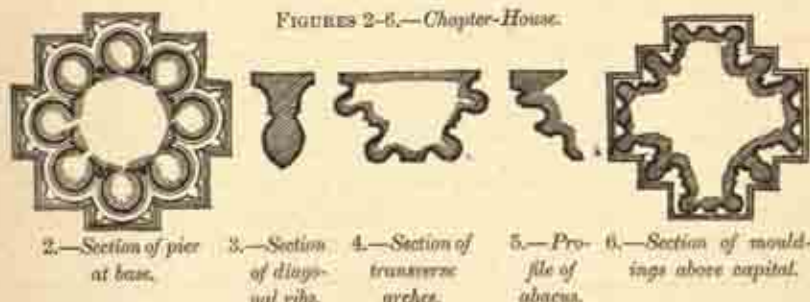
metrical base, carefully moulded, corresponds in height to the abacus of the capitals. The vaults are oblong and only slightly domed, and, as Mothes justly remarks, the rosettes of their keystones are very beautiful and delicate. Two peculiarities are at once noticeable in the three vaults near the windows. The imposts on the outer wall, and consequently the spring of all the arches and ribs on that side, are placed at a greater height. The diagonal ribs, therefore, do not intersect at the summit of the vault. In the second place, in order to secure this result, these outer bays are wider than the others and their longitudinal arches are semicircular, whereas those of the other bays are pointed, like the transverse arches. This is shown in PLATE VI. The evident reason for this was that the architect wished to have more wall space for the windows. An examination of the profiles of the capitals and bases, and especially of the transverse, longitudinal and diagonal ribs, will show very clearly that they all belong to the late-transitional types that were in vogue in the Ile-de-France between 1150 and 1210. They approach more closely, however, those executed during the last part of this period. The strongest resemblances are, for example, with those parts of Laon, Senlis, and Notre-Dame of Paris that date from 1170 to 1200.³⁰ A comparison with these and similar buildings shows that the architect of this Chapter-house of Fossanova was fully abreast with the times, and that his work is equal in beauty and skill to the foremost French constructions.³¹ He does not rest his ribs directly on the abacus of the piers; neither does he use circular bases projecting beyond it, as is frequently done in French and English transitional structures. But he gives strength to the ribs by making them spring from a solid bed of slightly decorated stone-work, after a fashion that is seen in transitional Cistercian buildings in Germany, and here and there in French work, for example, in the choir-aisle of the Abbaye aux Hommes (St. Étienne) at Caen, whose foliated capitals are also so similar to these at Fossanova as to seem made after the same model: they are on the same plan as the capitals at Laon, though the foliage is richer and more advanced.

³⁰ The drawings here reproduced are not mechanical reductions, so that their perfect proportions cannot be guaranteed in minute details.

³¹ For details of these French transitional structures reference may be made to the excellent work just published by Mr. CH. H. MOORE, *Development and character of Gothic Architecture*. Older authorities are VIOLETT-LE-DUC, *Dictionnaire de l'Arch. française*, under articles *Profil, Chapiteaux, Arcs*, etc.; PALEY, *A manual of Gothic Mouldings*, 4th ed., 1877.

The abacus (*Fig. 5*) of the clustered free and engaged piers is three-stepped, the upper step having a strong projection and greater thickness: the outline of the abacus is almost identical with that in the north triforium of Notre Dame of Paris.²² The body of the capital is circular and bell-shaped, and varies from the usual transitional style merely in the addition of a delicate surface-decoration of parallel pointed leaves of some fresh-water plant. The sturdy and strongly curling leaves that encircle the bell are arranged in a double row, those of the four shafts that support the diagonal ribs uniting near their tips with the corresponding leaves on the shafts of the transverse ribs (*PLATE XI-3*). There is uniformity throughout the capitals, in contrast with the variety in the capitals of the cloister and even of the church, none of which, however, are like these of the chapter-house.

The profiles of the mouldings of all the ribs, as they are combined



before disappearing in the bed over the abacus, are given in *Figure 6*. This combination is that of a pear-shaped moulding (*Fig. 3*) for the diagonal ribs with transverse arches consisting of a flat moulding flanked by two torus-mouldings from which it is separated by scotias. This is found in almost the same form but in an earlier stage at Senlis (end of XII cent.), on which it advances by the additional richness of the double moulding between the ribs and the further projection and reduction in width of the pear moulding, which is thus brought into more harmonious relation with the rest. The disadvantage of having a heavier profile for the diagonal than for the transverse ribs led at Notre Dame to the suppression of the pear moulding and the adoption of the triple rib in its place, making it equal in form to the transverse rib. The profile, given in *Fig. 4*, of the transverse before they partially coalesce with the diagonal arches shows an elaboration that is not found in such arches when they are used in the main naves of

²² MOORE, *op. cit.*, fig. 117.

transitional churches, and approaches very closely to the profile of the arcades of the naves of Notre Dame at Paris and S. Pierre at Caen, dated by Viollet-le-Duc shortly after 1200.

For these reasons, as well as on historical grounds, it seems highly probable that this Chapter-house was already finished at the time of Pope Innocent's visit in 1208, even with due allowance for the time required to introduce such a style from the Ile-de-France, where similar work had been done between 1170 and 1200. As a slight confirmation of this date, I may mention that a very similar form of the pear-shaped moulding is used, in this vicinity, in a building erected in the Cistercian style and clearly dependent on Fossanova. This is the church of Sta. Maria de Flumine near Ceccano, more than once mentioned: it was already finished and dedicated in 1196.

DORMITORIES.—Leaving the Chapter-house, we will investigate the rest of the monastic buildings around the cloister. Two old corridors and some small rooms are all that remain of the old work. As was the custom in Cistercian establishments, the lay-brothers had a dormitory in a part of the building separate from the regular monks; so, the long arm that ran in a line with the façade of the church was devoted to their large dormitory, and the corresponding arm parallel with the rear of the church was occupied by the monks. No separate cells were allowed; the whole second story contained a single long hall. For this reason, this part of the monasteries has always been made over when the luxury of separate cells was allowed by the order. The external walls, therefore, are all that remains of the main body of this part of the building: they are propped at intervals by heavy buttresses, and here and there, are windows, irregularly placed, some round others pointed, in the old style.

We now pass out, through the old corridor on the east side, into the great rear court and turning to the south we find a separate enclosure within which stand the buttressed enclosing walls of the hospital.

HOSPITAL (PLATE VII).—Three kinds of infirmaries or hospitals are to be found in large Cistercian monasteries: that for the monks, that for the lay-brothers, and that for the poor. The isolated position of the hospital at Fossanova and its unusual size would seem to indicate that this was a general infirmary or *valetudinarium*. It is still private property, not having been included in the buildings of the monastery that were declared to be of national importance. Consequently, it is ruinous: the roof fell in at some early date and nothing remains of it but the nine immense pointed transverse arches which

formerly supported the gable roof and divide the interior into ten bays. They still stand intact, as is shown in the PLATE, a sufficient proof of the architect's skill: opposite to them, on the exterior, is a corresponding number of buttresses. I was not able to obtain a key from the owner's agent, so that I cannot give the dimensions or sundry details of this hall, but base my remarks mainly on the photograph which was taken for me two years before. In height it appears to equal the church and does not fall far short of it in length. There are no traces visible of the internal arrangements, the entire surface being covered by a thick undergrowth. There were two stories of windows. In each bay there are, above, a narrow slightly pointed lancet-window whose base is on a level with the consols of the transverse arches, and, below, two small square-headed openings. The transverse arches are without mouldings and rest upon simple consols with mouldings of *circa* 1150-75. There is an obvious similarity in style between this building and the dormitory, whose roof shows us what that of the infirmary must have been. Here the windows are pointed and narrower; but this suggestion of a slightly later date is contradicted by the more advanced detailed work in the consols and windows of the dormitory. The two must be nearly contemporary.

The Italian Government did well to declare Fossanova a national monument, but if it wishes to preserve the entire group of monastic buildings, so precious in their collective interest and their relation to one another, it should certainly and without delay expropriate the hospital, the church of Sta. Potentiana, and the ancient buildings near the entrance.²⁵

GUEST-HOUSE AND CHAPEL OF ST. THOMAS.—In the rear of the church is a large open space enclosed by the high encircling walls of the monastery. Here was the vegetable garden and the orchard, and, by the side of the church, the cemetery. The only buildings connected with this court are the old church and a building which was apparently the second hospice or guest-house (beside that near the gate). The main structure belongs to the middle of the XII century or a little later, and consists of two stories with plain round-headed windows. Unlike the other buildings, it is constructed of small and irregular stones poorly put together. An addition was made to the front, perhaps in the XIII century. Here St. Thomas Aquinas stopped in 1274 on his way to

²⁵ I made a complaint to the Ministry, through a friend, and have been informed that steps were taken at once to have the hospital expropriated.

the Council of Lyon, and here he suddenly died, not without suspicion of poison administered by some creature of Charles of Anjou. The room which he occupied has been converted into a chapel. He was first buried in the cloister and finally in the church.

The width of the front is about 6.25 met. Attached to it is the old church of Sta. Potentiana. Originally an open colonnade extended from its south wall along the side of the old church, against which it rested. Four simple square piers and three plain round arches connecting them still remain. The length of this open gallery appears to have been about 22.25 met., and it was probably covered with a slanting wooden roof. It seems to belong to the earlier constructions of the monastery.

OLD CHURCH OF STA. POTENTIANA.—When the Cistercians came to Fossanova, they found this simple old church still in use, built several centuries before, probably in the VIII or IX century. It could hardly be earlier in date, for it was erected to take the place of the original church of San Salvatore, built in the VI century, which had become too small or too old. Its style confirms this date, in so far as can be judged from the exterior. No view of the interior is now possible, for it is packed full of hay and kept locked. The exterior is in a plain and homely pre-Romanesque style; the apse was doubtless destroyed when the adjoining hospice was erected across its north end. It contained but a single nave covered, apparently, with a wooden roof, and it had no transept. On either side are rows of seven windows, round-headed above and square below. Its length is about 24 met.

To conclude. These buildings were erected by the hands of French architects; Cistercian monks, who emigrated from their native land. They belong to different periods and styles, showing either that new architects were constantly employed who introduced the latest structural changes evolved in the mother country, or that the same group of architects by journeys to their native land kept abreast with the times. At all events, these buildings faithfully reflect the architectural changes that took place in France between about 1140 and 1200, apparently very shortly after the time that these changes occurred. They may be grouped as follows:

1. The *old Cloister*, with its barrel-vaults; a little later than that of SS. Vincenzo ed Anastasio; earlier than those of Valiscuolo, Casamari, etc. Date, c. 1140-50.

- II. The *Hospital and Refectory, Hospices* and body of monastic buildings. Date, c. 1150-70.
- III. The *Church*, except ruined porch and vaults over intersection, etc., may be considered to have been built between 1170 and 1200, the portal and rose-window belonging to the last part of the construction and approaching the style of the Chapter-house.³⁴
- IV. The *Western arm of the Cloister*, notwithstanding the lack of ribs to its cross-vault, which may be attributed to Cistercian simplicity,³⁵ appears to belong to the same date as the Chapter-house. This is shown by the advanced foliage of its capitals and the profile of its transverse arches. The presence, in each bay, of an *oculus* like that on the façade, and the similarity of the foliage on the capitals to that of the main portal leads to the selection of some date between 1185 and 1208 for both Western Cloister and Chapter-house.

It would be possible to bring forward further proof in favor of these approximate dates, especially from other Cistercian buildings. The entire demonstration cannot be made until I have published all these monuments, as I expect to do, *seriatim*.

The architectural influence of Fossanova was felt far and wide through this region, and was not only reflected in the monasteries founded by it, enumerated on pp. 16-17, but also in cathedrals and other churches and even in secular buildings. Such are: at Piperno, the Cathedral and Communal Palace; at Sezze, the Cathedral; at Sermo-neta, the Cathedral, S. Nicolò and S. Michele; at Amaseno, the church of S. Lorenzo; at Ceccano, the church of Sta. Maria de Flumine. These buildings were, for the greater part, built between about 1170 and 1250. It is not always easy to determine the relative share of Fossanova and of Casamari, the other great Cistercian monastery of the region: both were built in the same style and often worked together. Their influence extended from the centre of Tuscany to the end of Sicily. Fossanova had colonies in Apulia, Abruzzi, Calabria, Terra di Lavoro and Sicily; Casamari's foundations were even more numerous and wide spread.

A. L. FROTHINGHAM, JR.

Princeton College.

³⁴ The difference in the transverse ribs is, that in the Chapter-house they are moulded while in the porch they are still plain.

³⁵ Ribs were not required for structural purposes in these vaults.

REMINISCENCES OF EGYPT IN DORIC ARCHITECTURE.

If we examine the characteristics of Doric Architecture with a view to their origin, we cannot fail to reach the conviction that a large majority of them may be traced to Egyptian prototypes. This may surprise us at first, since the general aspect of the two styles of architecture is very different. The Egyptian temple is heavy and grand, impressing us by the massiveness of its walls and pylons, the number and size of its columns, the extent and multiplicity of its divisions. It consists of a succession of courts and halls, terminating in the sanctuary, which is enshrouded in darkness. On the other hand, the Greek temple is relatively light and graceful, more compact in form, with a central and better-lighted sanctuary, inviting the eyes of the people to rest upon the life-like statue of the divinity within. And yet, not only the general disposition of the Doric temple but those puzzling and apparently unmeaning forms which have given rise to so many wild hypotheses are to be found in their natural relations in Egypt, where their significance is clear. In its most complete form, the Greek temple is found within a sacred enclosure, a *temenos*, which was entered through more or less imposing *propylaia*. There is nothing strange or inappropriate in thus separating the religious from the non-religious structures, and the Greeks might naturally have done this without foreign influence. Yet we may remark that the Greek *temenos*¹—containing its sacred olive or oak or willow or myrtle or laurel, its sacred springs, and its altar for burnt-offering in front of the temple—may still be an echo of the Egyptian *temenos* with its sacred tamarisks and acacias and lotus flowers,² its sacred lake,³ and its altar in front of the temple.⁴

On approaching the Doric temple, we are struck with several features of apparently non-Egyptian origin—the krepidoma or stepped base upon which the temple stands, the peripteral columns surrounding the temple-cella, and the gable roof. If we look to the Orient for the

¹ BÖTTICHER, *Die Tektonik der Hellenen*, Bd. II, §§ 41, 44, 48.

² WILKINSON, *Ancient Egyptians*, vol. III, pp. 349-51.

³ PERROT and CHIFFET, *Égypte*, p. 351.

⁴ PHIBBS D'AVENNES, *Histoire de l'Art Égyptienne*, pp. 409-10.

origin of the krepidoma, we might suppose it to be a reminiscence of the terraced pyramids of Babylonia and Assyria.⁵ But none of the distinctive features of these temple-bases⁶ are reproduced in the Greek. In the Babylonian type, the successive stages are of different forms and are not superposed upon a central axis. In the Assyrian type, the ground-plan is square, and the ascent to the temple-cella is by means of a spiral ramp. An arched base appears, in one Assyrian relief, as the lowest stage of one of these terraced pyramids.⁷ Neither is there anything in the Doric krepidoma to suggest the panelled decoration or the coloring by which Mesopotamian temple-bases were characterized. But in Egypt we find closer analogues. There are many instances of a sacred structure set upon a plinth and reached by a flight of steps in front. Such are the little chapels over tombs at Sakkarah, and the little temples at Elephantiné.⁸ Nor do we need to look outside of Egypt for the stepped pyramidal form, for it is found in the mastaba-pyramids of the ancient empire.⁹ So far as the krepidoma is concerned, then, it is not necessarily a reminiscence of non-Egyptian forms. As for the peripteral character, this does not remind us of the ordinary disposition of the Egyptian temples, which are surrounded by heavy walls. However, Egypt, as early as the XVIII dynasty, was not without examples of peripteral temples, such as those at Elephantiné and El Kab,¹⁰ and was acquainted with the form *in antis* and *prostylos*, as these same examples show. Moreover, the sanctuary in the larger Egyptian temples was usually surrounded by a passage-way, corresponding to the Greek *pteron*. It has been customary, ever since the days of Vitruvius, to see in the peripteral huts of Lykia the prototypes of the Doric temple.¹¹ But, if we set aside its peripteral character, what a gigantic effort of the fancy is required to evolve from the Lykian but all the other peculiarities of Doric architecture! Even when we mention the gable roof, a form of structure unnecessary under cloudless southern skies, but practically universal in more northern climates, it is not to Assyria that we look for prototypes, for ruins and basreliefs

⁵ This is suggested by REBIEL, *History of Ancient Art*, p. 220.

⁶ PERROT and CHIFFEZ, *Assyrie*, c. iv.

⁷ *Ibid.*, fig. 34.

⁸ PERROT and CHIFFEZ, *Égypte*, figs. 190, 230.

⁹ The stepped pyramid of Sakkarah is considered by Mariette to be the oldest building in the world: MARIETTE, *Instructions de la Haute-Égypte*, p. 77.

¹⁰ MASPÉRO, *L'Archéologie égyptienne*, p. 66 ff.

¹¹ This theory is given in detail in HITTORF and ZANTH, *Architectur antike de la Sicile*, liv. vi.

there show us horizontal-roofed structures and but one example of the gable roof, and that on a basrelief representing an Armenian temple. But the Egyptians of the XII dynasty were acquainted with the gable roof, as may be inferred from the gabled ceilings in some of the tombs at Beni-Hassan¹² and from the pyramidal-roofed chapels of the Abydos tombs of the same period.¹³ We are not, then, compelled to assume either an indigenous or an Asiatic origin for Doric architecture, since all of its essential elements may have come to Greece from Egypt centuries before the primitive Dorians emigrated from their mountain homes in Thessaly.

In considering the elevation of the Doric temple, we may notice, as a peculiar and unnecessary characteristic, the inward slant given to the walls and to the peripteral columns. Structurally, there was no necessity for this; nor does there seem to have been sufficient optical

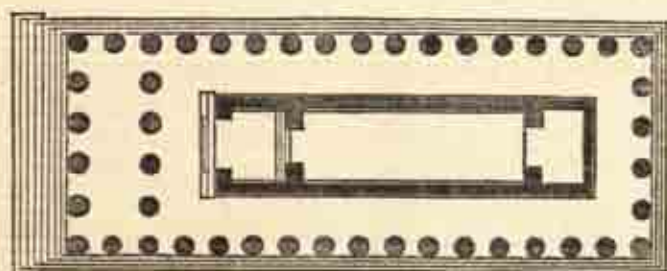


FIG. 7.—Middle Temple of acropolis of Selinus.

ground for such a peculiarity. We may notice, also, that it is found in the older Doric temples, but does not occur in the Ionic buildings. Are we to suppose that the more refined Ionians were not endowed with as keen vision as the ruder Dorians, and that they built perpendicular walls and set their columns vertically because their visual sense was dull? We cannot believe it, though an ancient Egyptian might. He was trained to see the walls of temples slant inward, as the surfaces of a truncated wedge. This made his structures models of solidity, and the Dorians perpetuated the tradition in peripteral buildings, where it had not the same significance. The inward slant in columnar structures supporting architraves was a source of weakness, not of strength, and it consequently diminishes in the more fully developed style.

¹² *Monumenti dell' Instituto*, vol. II, pl. 45; PROKESCH, *Erinnerungen aus Aegypten u. Kleinasien*, II, p. 21.

¹³ PERROT and CHUPIEZ, *Egypte*, figs. 160-2.

In their ground-plan, also, the earlier Doric temples resemble the Egyptian more closely than do the later ones. If we compare the ground-plan of Selinous Temple C (*Fig. 7*) with the plan of the ancient granite temple at Karnak,¹⁴ we find a similar elongated cella with its triple division into *pronaos*, *thesaurus* and *adyton*. The ratio of the shorter to the longer sides is nearly the same, both are entered from one end only, and they lack the columns and *antæ* in front. As it is possible, however, that the closeness of this resemblance may be due to the restorations made at Karnak by Philip Arrhidaïos, it is more to our purpose to observe that Doric temples preserve a reminiscence of the outer courts (*Fig. 8*) of the Egyptian temples, as well as of the innermost sanctuary. Of the Egyptian peristyle-court we find a close copy in the peristyle-court in front of the *megaron* of the royal palaces at Tiryns and Mykenai; and the vestibule (*αἶθουσα δώματος*) of the *megaron* seems to correspond to the Egyptian hypostyle-court. And in

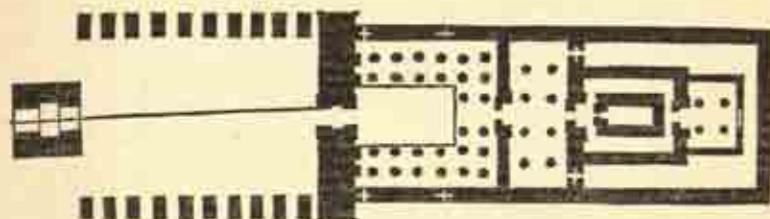


FIG. 8.—Southern Temple of Karnak.

Doric temples may we not see a reminiscence of the peristyle-court in the peristyle encircling the cella? The necessity of a peristyle-court had disappeared with the growth of the democratic spirit. The sanctuary of the divinity is brought into the very centre of the court of the people. This disposition was also more practical in a rolling country where temples were set on constructed bases. Why did the thrifty Dorians build useless rows of expensive columns around their temples, unless some significance such as this lay buried deep in their religious traditions? The Egyptian hypostyle hall, with its forest of columns, was still more non-essential to the Greeks, and could well be omitted, being a separate, distinctly marked part of the temple organism. But even this, according to the hypothesis we have ventured to propound, leaves a reminiscence of itself in the unnecessary row of columns in front of the *pronaos*, as is seen especially in Selinous

¹⁴ *Description de l'Égypte*, vol. III, pl. 21.

Temples C, S.¹⁵ That this identification is correct would seem to be substantiated by the unnecessary elevation of the pronaos above the peristyle, and of the inner divisions of the cella above the pronaos. Thus, at Selinous Temple C, we proceed from the peristyle up two steps to the pronaos, then four steps to the thesauros, and again one step to the adyton, as in the temple of Khons at Karnak we mount four steps from peristyle to hypostyle hall and one step to the sanctuary.

In methods of workmanship we find among the early Greeks many points in common with the Egyptians. Mr. J. T. Clarke writes in the *American Journal of Archaeology* (vol. II, p. 278): *The Egyptian origin of many of the methods of quarrying, cutting and lifting large blocks of stone, in use among the Greeks, becomes more and more certain as our acquaintance with the architectural remains of these countries increases. To take one instance among many: the peculiar method of employing the lewis, observable in early Hellenic buildings (witness the temple of Assos), is the same as that which appears upon Egyptian reliefs, and is recognizable among the debris of Egyptian quarries.* We may add to this the similarity in the mode of bonding stones by means of clamps,¹⁶ of laying the trapezoidal blocks in horizontal courses,¹⁷ of the use of a projecting socle with or without an ornamental base-moulding,¹⁸ of the inward slant and diminution of the cella-walls, and, finally, the covering of the stone with stucco to secure a surface for polychromatic decoration.

Of all the points of resemblance between Greek and Egyptian architectural peculiarities, more attention has been bestowed upon the channelling of the columns than upon any other, until it has become almost a commonplace of the text-books to assume that the polygonal channelled shafts of Beni-Hassan are the prototypes of the Doric, and yet the channelling is almost the only peculiarity which these two modes of support have in common. The polygonal shaft is evolved from lithic antecedents,¹⁹ the simplest form of which is the square pier: it has an abacus but no capital. The Doric column differs essentially

¹⁵ In the absence of an appropriate name for these columns, may we not venture to call them the hypostyle columns?

¹⁶ DÜRM, *Baukunst der Griechen*, p. 43.

¹⁷ *Ibid.*, p. 46.

¹⁸ Cf. PERROT and CHIPÉZ, *Égypte*, II, figs. 131, 132; DÜRM, *Bauk. d. Gr.*, p. 56.

¹⁹ W. S. PRATT, *The Columnar Architecture of the Egyptians*, in *Proc. of Amer. Acad. of Arts and Sciences*, vol. XV, p. 313 ff. Mr. Pratt proves conclusively that the Doric column is not derived from the polygonal shaft at Beni-Hassan, but hastily rejects as absurd a suggestion of its derivation from the commoner type of Egyptian column.

from this. It has a strong tapering character, diminishing toward the top: the polygonal shaft has a very slight diminution.²⁰ The column has an *entasis*, which gives it a curvilinear profile: the polygonal shaft, so far as we know, has no *entasis*. The column has a neck with incised annuli, and a capital consisting of a strongly curved echinus with raised annuli: the polygonal shaft has neither neck nor annuli nor echinus. All of these peculiarities betray the ultimate though not immediate derivation of the Doric column from wooden prototypes, and are found in the Egyptian so-called lotiform columns,²¹ which may be more properly named reed-bundle columns. As we know that reed-bundle columns are used to this day in Egypt, Mesopotamia and India,²² we find here a natural explanation for this class of columns. The strong diminution is accounted for by the natural tapering of the reeds; the annuli are bands by which the bundle of reeds is bound together; the echinus of the capital and the entasis of the shaft represent the natural yielding of the bundle of reeds, which would be found just above the points where they are held together, when sustaining the weight of a heavy entablature (*Fig. 9*). Professor Lepsius²³ emphasizes the derivation of the Doric (*Fig. 10*) from the reed-bundle column of Egypt, but believes that the one feature of channelling was borrowed from the polygonal shaft. But, if we may trust the apparently careful drawing in Prisse d'Avennes of the details of the temple at Gournah (he calls it Menephtehum) (*Fig. 11*), we see that the Egyptians themselves, by the time of Seti I, had begun to channel the reed-bundle column. It should not surprise us, therefore, that the Greeks did the same. The inner order of columns of the temple at Gournah are decorated with sculptured figures, suggesting to our minds the *columnæ calatæ* of Ionian architecture. We make a further observation in connection with this temple. The columns have bases, but the intercolumniations are filled in with blocks of stone up to the level of the bases of the columns. This diminishes the effect of the huge bases and suggests the improvement made by the Greeks in omitting the bases altogether.²⁴

The Ionic capital is less directly but no less truly of Egyptian ori-

²⁰ PRATT, *ibid.*, pp. 323-4.

²¹ PERROT and CHIFFREZ, *Égypte*, figs. 76, 78.

²² PRATT, *ibid.*, p. 346.

²³ *Annali d. Inst. Arch. di Roma*, 1837, and *Abh. Berl. Akad.*, 1871.

²⁴ It is highly probable that the earliest Doric columns were provided with bases: See CLARKE, *A Doric Shaft and Base found at Assos*, *AJA*, II, p. 267.

gin, having been derived, as Professor W. H. Goodyear has shown (*AJA*, III, p. 271 ff.), from a conventional lotus-flower, which, as a decorative form, had spread in very early times from one end of the Mediterranean to the other. Even the Corinthian capital may be best explained as a variation of the Egyptian calyx-capital, in which the Greek acanthus has been substituted for Egyptian floral decoration.²²

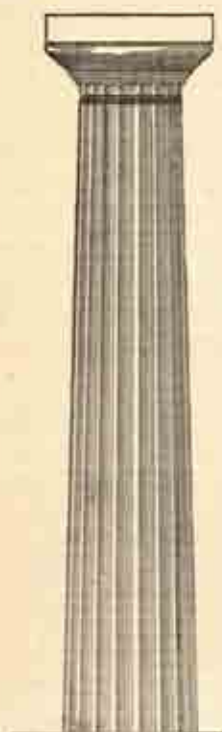


FIG. 10.
Doric Column.

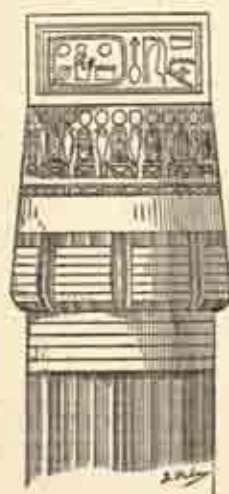


FIG. 11.
Reed-bundle Column at
Gournah. (Seti I).

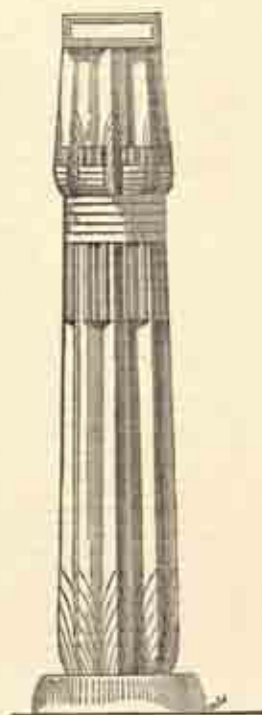


FIG. 9.
Reed-bundle Column.

In every instance, the Greek capitals exhibit forms which, as such, may attract our attention as more beautiful, geometrically more exact, and artistically further advanced; but the naturalistic starting-point is found in Egypt.

It is sometimes admitted (as by Reber in his *History of Ancient Art*) that the Greek column is of Egyptian origin, while it is still main-

²²This was suggested, in 1803, by QUATREMÈRE DE QUINCY, *De l'Architecture égyptienne*, p. 251.

tained that the entablature is not. But it is not difficult to discover in the Greek entablature some reminiscences of an Egyptian ancestry. The Egyptian entablature consisted of architrave and cornice. Let us assume that the earliest Greek entablatures consisted of these two members only, and that the separation of frieze and cornice was a later development. We may then see in the Greek entablature a distinct reminiscence of an Egyptian prototype. The Egyptian cornice consisted of three elements: a torus-moulding, above which was a scotia or concave member, and above this a flat corona (*Fig. 12*). In the Greek entablature, the round torus-moulding is replaced by a square

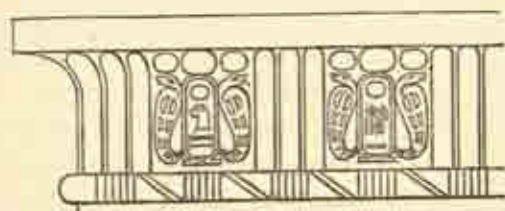


FIG. 12.—*Egyptian Cornice.*

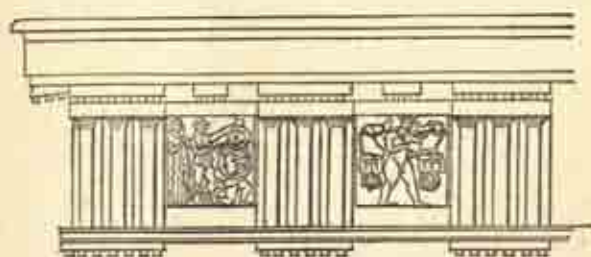


FIG. 13.—*Entablature of Selinous Temple C.*

fillet, but the change had not been completely established when Selinous Temple *C* was built, for the square fillet here has a round moulding embedded in its central line (*Fig. 13*). The Egyptian scotia, which gave a horizontal line of shadow below the corona, is replaced in the Greek entablature by the triglyphal frieze. This retains the likeness of its ancestry in presenting a division into triglyphs and metopes, similar in form and color to decorations of the Egyptian cornice, and resembles it, also, in the horizontal line of shadow resulting from the overhanging cornice. It diverges from its Egyptian prototype in substituting an acute angle for the curved scotia. Even this substitution had not been completely made in Selinous Temple *C*, where the upper

part of the triglyphs are slightly but distinctly curved. The chief element in the Greek cornice, the corona, resembles the crowning member of the Egyptian. It may be objected, that it is simpler to suppose the Greek entablature a mere translation into stone of preëxisting wooden forms of construction. But, as a matter of fact, the actual ceiling-beams, of which the triglyphs are supposed to represent the decorated ends, do not correspond, either in position or arrangement, with the triglyphs. Again, the triglyphal frieze, if a translation of wooden forms, presupposes the previous existence of a horizontal ceiling. But the earliest Greek temples seem not to have been horizontally ceiled, for roofing-tiles painted on both sides, found at Selinous Temple S, indicate a gable, not a horizontal ceiling. The mutules, also, which correspond more nearly, in their position above the frieze, to the actual ceiling-beams, preserve by their form the suggestion of a sloping roof, even on the short sides of the temple, where that suggestion has no corresponding structural significance. So that they who assume an indigenous origin for the triglyphal frieze may be forced to admit that it is not an immediate translation into stone of previous wooden construction, but is composed in a purely decorative manner. Assuming, then, the fundamentally decorative character of the triglyphal frieze, we find several points of correspondence with its Egyptian ancestral form. The continuous row of leaves, which ordinarily decorates the Egyptian cornice, is frequently broken into successive groups, each composed of three leaves, corresponding to triglyphs, while the otherwise decorated intervening spaces may be compared to metopes. In Egyptian, Assyrian, and Phœnician industrial art, many instances may be found of this metopal method of decoration. When this arrangement occurs in architecture, the decoration at the temple corners is made in Egypt by a group of three leaves, as in Doric by the corner triglyph. Again, the leaves are incised and have curvilinear termini, as have the grooves of early Doric triglyphs: in Egypt, the leaves were painted blue, the color invariably used for Doric triglyphs. A general correspondence between the Doric frieze and the Egyptian cornice was observed at the end of the last century and was rejected, as a mere superficial resemblance, by Quatremère de Quincy. It was more thoroughly recognized by Hans Auer in a careful series of papers on the significance of triglyphs.²⁶ To the same writer we are indebted for having noted the fol-

²⁶ *Zeitschrift f. bild. Kunst*, 1880.

lowing correspondences between the proportions in Egyptian and Doric architecture.

I. *Egyptian*. (1) The height of the columns varies from $4-4\frac{1}{2}$ lower diameters in the monuments of the earliest period to $6-6\frac{1}{4}$ in the latest : when Egyptian architecture was most flourishing (Karnak and Luxor), the prevailing norm was $5-5\frac{1}{2}$ l. d. (2) The intercolumniation varies from 1 and $1\frac{1}{2}$ to 2 lower diameters : in the middle period it is almost regularly $1\frac{1}{4}$. (3) The height of the architrave including the torus moulding varies from $\frac{2}{3}-\frac{1}{2}$ l. d., that of the entire cornice from $1\frac{1}{2}$ to $1\frac{3}{4}$ l. d. The *axenoeite*, or distance from centre to centre of the columns, compared with the entire height of the order, varies from $1:2\frac{1}{4}$ to $1:3\frac{1}{4}$.

II. *Doric*. (1) Columnar height in lower diameters : $4\frac{1}{4}$ Corinth, 5.48 Parthenon, 5.68 Theseion, $6-6\frac{1}{2}$ Portico at Delos and Stoa at Athens. (2) Intercolumniation : $1\frac{1}{2}$ Corinth, .98-1.1 Old Parthenon, 1.26 New Parthenon, 1.64 Theseion, $2-2\frac{1}{2}$ Delos. (3) Height of architrave in lower diameters : $\frac{1}{4}$ Corinth, $\frac{2}{3}$ Old Parthenon, $\frac{1}{5}$ New Parthenon, $\frac{1}{2}$ Theseion, $\frac{2}{3}$ Stoa at Athens. The normal height of the entablature, with or without the kymation, is 2 lower diameters. The average norm for the relation of the axis-distance to the height of the order is 1:3.

These proportions hold for the reed-bundle order of Egyptian architecture and not for the polygonal columnar system, an interesting fact in discussing the origin of the Doric column. It may also be observed that the line of development in Greece is the same as that in Egypt.

Before leaving the entablature we may remark that it is not easy to see the exact historical significance of the *regulae* below and the mutules above the frieze with their trunnels or *guttae*. If of Egyptian origin, are they to be connected with the dentils, such as those which appear over the architraves at Beni-Hassan, or with the pendent lotus-buds which hang from the wooden royal pavilions,²⁷ or with the decorations which sometimes adorn the architraves?²⁸ None of these suggestions seem to be satisfactory ; so, we leave the problem of their origin undetermined, remarking merely that the modern wooden-peg and the ancient rain-drop hypotheses do not give us any further light.

There is a structural peculiarity in Doric architecture which has

²⁷ PRINCE D'AVENNES, *Plates, Constructions en bois*.

²⁸ QUATREMÈRE DE QUINCY, *Arch. Egypt.*, pl. 7, figs. 46, 49.

received considerable attention, especially from English observers—the curvature of horizontal surfaces.²⁹ It is found in the rock-cut base of the archaic temple at Corinth, and on both base and entablature of the Poseidon temple at Paestum, as well as in the more refined buildings at Athens—the Theseion, the Parthenon, the Erechtheion, and the temple of Zeus Olympios. It would seem as if we might admit that at least this peculiarity was developed by Greek rhythmical sense, for it is nothing short of a generalization, through the whole structure, of the columnar entasis. But even here the Egyptian architect had set the fashion. Rosellini, in describing one of the tombs at Beni-Hassan,³⁰ calls attention to the fact, that the surfaces of the gable-ceiling are not flat but are slightly curved, and Pennethorne³¹ has observed and measured the curvature of the architraves of the inner court of Medinet Abou.³²

Painted ornaments and sculptured mouldings also exhibit a strong Egyptian imprint. We do not need to look so far back as the painted walls at Tiryns and the sculptured ceiling at Orchomenos for reminiscences of Egypt in Greek decorative design. The spiral and square meander, the palmette and rosette, and the star upon a blue ground, are well-known Egyptian motives.³³ Similarly, the astragal and the egg and dart, the heart-ornament and the ox-mask, may be traced back to the earliest dynasties of the Egyptian empire.³⁴

Our aim has been, to merely point out the many indications of relationship between Egyptian and Doric architecture, not to determine the exact historical relation between them. But we may here recall the fact, that Thothmes III conquered the Greek islands³⁵ and that, for the two centuries from the reign of Seti I to that of Rameses III, Pelasgian tribes invaded Egypt, and with them were Achaians, Lykians, Etruscans (Tyrseni or Tyrrheni) and Siculi;³⁶ and that, during the

²⁹ PENROSE, *Principles of Athenian Architecture*; PENNETHORNE, *The Geometry and Optics of Ancient Architecture*.

³⁰ *Mon. Civ.*, vol. I, p. 70; quoted by LÆRSIUS, *loc. cit.*, p. 89, Note 1.

³¹ *Op. cit.*, pt. III, ch. II.

³² At Medinet Abou, the curvature of the architrave is horizontal, instead of vertical as in Greece.

³³ PRUSSE D'AVENNES, *Plates, Ornementation des Plafonds*.

³⁴ DIEULAFOY, *L'Art antiq. de la Perse*, pt. 3, p. 61.

³⁵ MASPERO, *Histoire ancienne des peuples de l'Orient*, p. 206.

³⁶ The famous inscription from Karnak, recording the conquest of Menephtah over the Lebu, Kehak, Mashuasha, Tulsha, Leka, Akaiouasha, Shardana and Shakalasha,

reign of Menephthah, they settled there, until the king complained "They have established themselves; the days and months roll by and they still remain."³⁷ We then find the palaces of Achaian princes and the Mykenai type of art saturated with Egyptian influence. Through such monuments in the Peloponnesos and in the Greek islands, the Dorians, from the first moment of their conquest, came into contact with semi-Egyptian architectural and decorative forms. Through the Phœnicians, also, they received an inspiration of similar character, until, in the seventh and sixth centuries, direct relations with Egypt were fully established.

To summarize our results—we have found reminiscences of Egypt in Doric temple-architecture in the temenos with its sacred trees and springs and altar; we have seen that the temple-base, the peripteral supports, and the gable roof, are not necessarily non-Egyptian forms; we have found that the Greek preserves the Egyptian methods of construction, even to the use of slanting walls and stuccoed columns; that the temple-plan shows reminiscences of the peristyle and hypostyle halls, as well as of the sanctuary; that the diminution, entasis, echinus, and annuli of the Doric shaft may be best explained upon the hypothesis of an Egyptian origin, and that the Ionic and Corinthian capitals became intelligible in the same way; that the Doric entablature, by both the form and the color of its triglyphal frieze, betrays its relationship to the Egyptian cornice; and that the ordinary details, whether sculptured mouldings or painted ornament, are mere variations of well-known Egyptian forms.

ALLAN MARQUAND.

Princeton College.

has been variously interpreted. De Rougé, Chabas, Lenormant, Maspéro, Curtius, and Brugsch favor a combination of Libyan with northern peoples. On the other hand, Unger, Duncker, Halévy, and Wiedemann interpret them all as Libyan tribes. See WIEDEMANN, *Ägyptische Geschichte*, 13 Kap., § 37.

³⁷ LENORMANT, *Histoire ancienne de l'Orient*, vol. II, ch. IV, § 6.

THE DISTRIBUTION OF HELLENIC TEMPLES.

The following paper¹ has the special purpose of measuring the reverence paid to each Greek divinity by means of the number of temples dedicated to its worship; and, secondly, of showing in what parts of Hellas temples were most numerous, and what deduction can be drawn therefrom in regard to the relative size of Greek towns. Many shrines and temples have undoubtedly vanished without leaving any tradition of their existence, so that, on this account alone, data about Hellenic temples are necessarily incomplete. Most of the temples with which we are acquainted lie scattered through the whole volume of Greek literature; thickly sown in some places, in others, again, so sparsely that the labor of collecting them would hardly be repaid by the greater exactness of the results.

An average has been sought by examining representative records of three general classes. First, the ancient geographers: they, especially such as are animated by an antiquarian spirit, give the best and fullest information. Second, historians, who often notice, rather by chance than otherwise, a shrine or temple because it was the scene of some action they describe. Finally, inscriptions, especially public decrees, usually contain a clause directing that they shall be set up in some shrine, where they would be more secure than elsewhere. The chief source of information has been Pausanias. He mentions perhaps three times as many temples as any other ancient writer, and consequently our knowledge of most Greek temples represents them as they stood in the light of the second century A. D. But Pausanias does not extend beyond Greece itself, so, in order to fill out the picture for the colonies, Strabo has to be put under contribution, and this especially for his native country, Asia Minor. The authors termed collectively *Geographi Minores*; and the *De Urbibus* of Stephanos of Byzantion add a few temples not mentioned by Pausanias and Strabo. The historians Herodotos, Thukydides, and Xenophon supply almost nothing, but Polybios and Diodoros give a considerable number not mentioned by

¹ The preparation of this paper was suggested to me, while Fellow in Archeology at Princeton College, by Professor Marquand. Although the collection of materials on which it rests is not exhaustive, it is believed to be sufficient to justify its conclusions.

the others: Diodoros does so especially for his native country, Sicily. The inscriptions that have been put under contribution are those contained in the *Corpus Inscriptionum Græcarum*, the *Corpus Inscriptionum Atticarum*, and in the publications of the French and German Schools at Athens. From these various sources there have been gathered notices of over 1300 temples and shrines, of which certainly 1280 are attributed to some divinity. These are probably quite sufficient to show how Greek temples were distributed among the various divinities. As a second object the same collection may be used, though with less certainty, to show how the temples were scattered over the Greek world, and in what spots they were specially numerous.

First, then, in regard to the divinities to whose worship Greek temples and shrines are usually consecrated. **APOLLON** stands at the head of all. Artemis and he together have more shrines than any other three divinities. Apollon is held in special honor in the Greek Islands (chiefly Krete, Delos, Rhodos), which devote twenty percent of their temples to him. The coast towns of Asia Minor, more particularly those of the Troad, come next in preferring him, and after them Northern Greece; but the Peloponnesos has more temples of Artemis, and also of **ATHENA**, who comes third in rank. Besides receiving the greatest number, Apollon also seems to have had the richest shrines, and no other god could show such treasures as were preserved at Branchidai, Delos, and Delphoi when these towns were in their glory. **ARTEMIS** is the second in general favor, although Athena has rather more temples in the Islands (except Krete) and in Northern Greece. The worship of Artemis is most prevalent in Arkadia, Elis, and Achaia, where hunting was better than in other parts of Greece and agriculture less good. Ephesos may have been her most famous shrine, but Lydia as a whole seems to have given equal honor to Athena. **ZEUS**, the fourth deity, is mostly represented in the Doric Islands. Sicily, Krete, and Rhodos give him about fifteen percent of their temples; and he is there second only to Apollon. Karia comes next after the Islands, but the Ionic and Aiolie parts of Asia Minor are less favorable to him. On the mainland of Greece, Boiotia, Arkadia, and Lakonikê give him many shrines; but Messenia only one, and Phokis none at all. **APHRODITE**, the fifth, has most of her shrines in Argolis, Arkadia, and Attika. She is but slightly represented in the Islands (except the half-Hellenized Kypros), and rarely also in Lakonikê, Messenia, and Phokis. **DEMETER**, the sixth in degree of favor, has her home in Boiotia, Arka-

dia, and Attika; though her temples are also sparsely found in Argolis and the district around Korinthos. **DIONYSOS** comes next after Demeter in number of shrines, and, besides this, he is worshipped in much the same localities, as might be expected from his connection with the mysteries. **ASKLEPIOS**, the eighth, closely follows Dionysos, but belongs almost wholly to the Peloponnesos, especially to Lakonikê, Messenia, and Arkadia. In Boiotia, he seems to have had no shrine at all, and is only slightly represented in Phokis, Krete, and Attika. **POSEIDON** is worshipped chiefly in Achaia and Argolis, but in general his worship is widely scattered. **HERA**, the tenth, is honored in Argolis and the district of Korinthos, as well as in the Italic colonies. **KYBELE** is naturally frequent in Lydia and Mysia, but sporadic and at distant intervals in Greece. **HERAKLES**, the twelfth, is mostly honored in Boiotia, where he is quite as frequent as any of the greater deities. His cult seems altogether absent from Argolis (precinct of Hera), and is very rare elsewhere. **EILEITHYIA** is found chiefly in Argolis, Achaia, and Krete. Less than one percent of all the temples belong to the **DIOSKOUROI**, who have shrines in Argolis, Arkadia, and Lakonikê. **TYCHE** prevails in Korinthos and Argolis, and usually represents the Roman Fortuna. **HERMES** occurs several times in Boiotia and Arkadia, but is otherwise very rare. **PAN** is honored in Arkadia and Attika; **KORÉ** in Italy and Sicily, but elsewhere her shrines are much scattered, and she is in most cases counted with Demeter, since they often have a temple in common. **ARES** is found to prevail in Argolis and Attika, **PLOUTON** in Elis, the **MOIRAI** in Lakonikê, **GÊ** in Attika and Lakonikê. The other gods, goddesses, and heroes are too rare to merit separate mention. Foreign gods represented by Isis, Sarapis, Atargatis, Men, and several others have not been counted. Their shrines are about $\frac{1}{10}$ th of the whole number in the late period to which our sources belong. In regard to rank, thirty-four percent of all the shrines and temples belong to secondary divinities; sixty-six percent to the twelve greater gods. The minor heroes (excluding Herakles by this term) are found to be very frequent in Lakonikê and Attika. Sparta has some twenty-eight heroâ, and Athens sixteen, but in the other states they are comparatively rare.

In regard to the sex of the divinities, just the same number of temples and shrines belong to goddesses as to gods. Of the twelve greater deities, more belong to goddesses: namely, fifty-seven percent to forty-

three.² In the hero-class it is found that almost all are male; and shrines of heroines, such as Helena and Kassandra, are quite rare.

Our second point was to consider the distribution of shrines and temples over the districts and towns of Greece, and the indications thus given of their population. In view of our lack of information about the size of most of the smaller towns, the number of shrines becomes almost the only available basis for conjecture as to their relative magnitude, and this, owing to the lateness of our sources, chiefly for the period immediately before and after the Christian era. Against the accuracy of this proportion it may be urged that we are not acquainted with the whole number of temples; that they often exist long after the population of the town has greatly decreased. Some temples are situated on uninhabited mountains or in very secluded spots; and others, like the temple of Artemis at Ephesos, seem to absorb all the religious energy of the community and leave no room for the growth of minor shrines. Temples were sometimes built in obedience to oracles or dreams, and in such cases would seem to be not at all dependent upon population.

These objections are to some extent valid, but, though they impair, do not entirely destroy the truth of the proposition, that, in general, the number of temples is in proportion to the number of people. We have no detailed account of the temples in Asia such as there is for Greece, so that only in the mother-country can any argument as to population be safely drawn from the number of known temples. Pausanias has given us the names of so many shrines that it is probable we have almost all of those above a certain size in the districts over which his guide-book carries us. He occasionally mentions a temple in ruins; and, no doubt, the name clung for a long time to the site after the worshippers were gone. Consequently, the number of temples is more strictly related to the population of a town at a period somewhat before the time when Pausanias visited it. If a town had been burnt or razed, then the temples would date back to its most flourishing period since that catastrophe. Thus, our list of Greek temples would seem to show that it represented the condition of Greece rather before the

² This excess of shrines dedicated to goddesses may show that the majority of worshippers were women, at least in this late period of Greek history to which Pausanias and Strabo belong. The extent to which the convenience of women was consulted in religious matters at this time is illustrated by the objection which Vitruvius (III.2) had to the so-called *pycnostyle* temple; viz., that women had to let go each others arms in passing between its crowded columns.

Christian era, perhaps as much as one or two centuries before, inasmuch as temples to the emperors and to various foreign gods were presumably the only new ones built after the beginning of the empire.

Taking the statistics for the various districts of Greece, Lakonikê is found to be in the front with 155 temples and shrines; next come Arkadia with 145, Attika with 133, Argolis with 116, Boiotia with 70, Achaia and Korinthos with about 68 each, and then, in order, Elis, Messenia, Phokis, Lokris (including the smaller Greek states), and Thessaly. The importance of Lakonikê and Arkadia is to be expected, on account of their large size and the great number of towns they contain. Then, too, they were more remote from attack by land; and, during the conquest of Greece by Macedon and Rome, Sparta and the larger Arkadian towns resisted just enough to make terms with the conquerors, but not enough to enrage them. Thebes and Korinthos, on the other hand, had been entirely destroyed; and Athens had been greatly injured when stormed by Sulla.

The number of temples in the larger cities of each Greek state is as follows: Sparta 84, Athens 71, Argos 36, Megalopolis 32, Megara 26, Sikyon and Hermione 23 each, Patrai 20, Tegea 19, Korinthos, Troizen, and Olympia 17 each, Thebes and Mantinea 16 each. Only the acropolis of Thebes was inhabited during this period, and the city itself had shrunk more than any other capital in Greece, whereas Lebadeia and Tanagra had risen to be important towns. As if in confirmation of this historical tradition, the number of their temples places them second and fourth among the towns of Boiotia. Megara, to judge by its temples, was then the fifth city in Greece; a position it probably owes in part to the favor of Hadrian. Sikyon may have grown in population at the expense of Korinthos, as it did in territory; since, according to the number of its shrines, it was larger than its neighbor, although Korinth was the seat of the Roman government in Greece. Strabo (377), in a passage where he is evidently speaking of the Peloponnesos, calls Argos the city next in rank to Sparta. Megalopolis he considers the largest city in Arkadia; and this must have been especially true at a somewhat earlier period than that for which he writes. Next after Megalopolis came Tegea, but Mantinea and the other Arkadian towns he describes as already falling in ruins. In Argolis, both Hermione and Troizen are described (373) as very considerable (*οὐκ ἄσχημοι*) cities. In regard to the size of the smaller cities of Greece, we are in most cases left without any historical statements; so that the number

of temples they contain is almost the only clue there is by which to determine their relative importance. By the number of temples a city contains, erroneous impressions as to its size may perhaps also be corrected. Thus, Delphoi and Eleusis, on account of their fame and importance in Greek history, might be considered large towns; but the few temples they possessed point to a very small resident population.

In regard to the Greek Islands and colonies, our information about the temples is far less complete. Such as it is, it shows Sicily at the head, with Krete next, though at some distance below. After these two islands come Aigina, Rhodos, Eubœia, Delos, Lesbos, and Samos, in this order: but probably Aigina owes its high position to the fact that it alone is described by Pausanias, while the others depend on less thorough sources. Of the cities in Asia Minor, Smyrna leads, and after it comes Pergamon, followed by Kyzikos, Halikarnassos, Mylasa, Miletos, Teos, Erythrai. It is from Tacitus (*Ann.*, iv.55) that we obtain the best view of the condition of these towns under the Empire. He relates an occurrence of A. D. 23, when eleven of them sued for permission to erect a temple to Tiberius. Tralleis, Laodikeia, Ilion, and some others, were immediately rejected as too small, when the dispute was referred to the senate. Halikarnassos, Pergamon, Ephesos, and Miletos were passed over with greater hesitation; and finally, after setting aside Sardis, the coveted honor fell to Smyrna. Kyzikos did not compete, as belonging in another province, although Strabo (575) says it was among the first cities of Asia. If the colonies be rated by larger districts, Lydia is found to have some 50 temples, Mysia 40, Karia 32. The rest of Asia Minor supplies 38, colonies north of the Black Sea 12, Thrace, Makedonia, and Epeiros 38.

In conclusion, it may be well to point out what seem to be the chief result of these statistics. The importance of Apollon, Artemis, and Athena is especially to be noticed; and, in comparison, the inferior position of Zeus, their nominal ruler, and of Hera, his queen. Outside of the twelve greater gods, Apollon's son Asklepios receives the most honor. Without laying stress on the exact number of temples in any district or town, it may be safely concluded that their distribution throws some general light on the obscure movements of the Greek people which took place after their loss of freedom.

GEORGE B. HUSSEY.

Princeton College.

ΖΕΤΣ 'ΗΑΙΟΠΟΛΙΤΗΣ.

M. H. Bazin published in the *Revue Archéologique*, in 1886,¹ a remarkable marble relief, which was found at Marseilles in 1838 and is now in the *Musée Calvet* at Avignon.² This monument (*Fig. 14*) measures about half a metre in height and presents in very high relief (almost sculpture in the round) a stiff figure of a divinity standing upright with right hand raised and left hand formerly stretched forward; to the right and left of the figure are two small standing bulls. Bazin thinks there can be no doubt that we have here a Roman copy of a very old Greek statue, and he believes, on account of the broad and heavy forms, that the original belonged to the art of Ionia. The divinity certainly stands in a stiff, archaic fashion, and the peculiar costume also impresses us as archaic, or, better still, as strange. A broad garment, flowing down to the feet, covers the body; over this, enclosing the body like a coat of mail, and giving to it the appearance of a *herma*, is a covering which in turn is ornamented with a central *herma* and six busts arranged in three bands; below this sheath, upon the garment, is a lion-head. Around the neck is a heavy necklace formed of dolphins; the hair is arranged in peculiar locks, which remind M. Bazin of coins of Juba from Mauritania, and which resemble also other representations of barbarians, especially Egyptians. The head is crowned with a flaring *kalathos*.

The late character of all this decoration has not escaped M. Bazin, but he considers it the arbitrary work of the copyist. He believes the type of the statue to be old and genuine, and that it represents Artemis Diktyнна, who swings in her (now destroyed) right hand a knife, about to slay the bulls which stand beside her. He considers that this substantiates the meaning of the name Artemis given by Robert,³ and proves, furthermore, that it was Diktyнна, and not the Ephesian Artemis, who was brought by the Phokaians from their mother-country. It is unnecessary to examine here the further con-

¹ *Troisième série*, VIII, pl. 26, p. 257.

² STARK gave a brief notice of it in the *Arch. Anzeiger*, 1853, p. 365.

³ PRELLEH, *Griechische Mythologie*⁽⁴⁾, I, p. 296, 2; STUDNICKA, *Kyrene*, p. 154, 77.

sequences drawn by M. Bazin. So far as I am aware, only Robert¹ has expressed his agreement with Bazin; and the only objection raised has been by Paris,² and in this case only to the appellation Diktyнна, since he prefers to see in it the Ephesian Artemis, as did Stark (see Note 1).

In my opinion, this interesting monument requires an entirely different explanation. This is made possible by means of the relief



FIG. 14.—High-relief of Zeus Heliopolites, found at Marseilles in 1838.

figured in the *Gazette Archéologique* (II, pl. 21) and very properly interpreted (pp. 78 ff.) by F. Lenormant (*Fig. 15*). It is sculptured upon the right side of a votive-stone, which was found at Nîmes in 1752 and is still kept there. Upon the opposite side is a shield and

¹ PRELLER, *Op. cit.*, I, p. 297, Note; p. 318, Note 1.

² DAKEMBERG, *Dictionnaire des Antiquités*, II, p. 152.

sword in relief; the back is unsculptured; the front bears the inscription *J(ovi) O(ptimo) M(aximo) Heliopolitan[o] et Nemauso C. Julius Tib(erii) fil(ius) Fab(ius) Tiberinus, p(rimi) p(ilaris), domo Beryto, eotum solvit.* The figure is not so well preserved as the one first described, but corresponds to it in all essential particulars. Instead of the two bulls, one animal is here represented, placed behind the divinity and at his feet, though so destroyed as to be hardly recognizable;⁶ and the chief

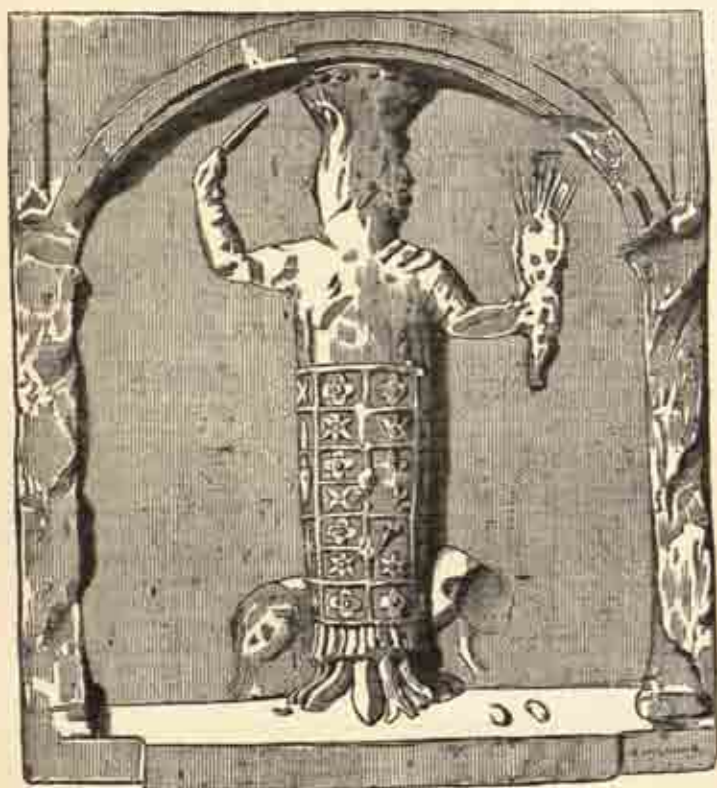


FIG. 15.—Votive Relief of Zeus of Heliopolis, found at Nîmes in 1752.

ornamentation of the figure consists of rosettes instead of busts. The attribute which the divinity holds in his left hand is not sufficiently clear; that in his right seems to be a small staff. In explanation, Lenormant cites the passage of Macrobius (*Saturn.*, i. 23. 12) which

⁶STUDNICZKA (*Archäologisch-epigraphische Mittheilungen*, VIII, p. 61) explains it as a bull, and this explanation is probably correct.

gives a description of the statue of Zeus in Heliopolis: *Simulacrum enim aureum specie imberbi instat dextera elevata cum flagro in aurigae modum, laeva tenet fulmen et spicas, quae cuncta Jovis solisque consociatam potentiam monstrant.* From this, there can be no doubt that the stone at Nîmes represents the Zeus of Heliopolis,⁷ and that the same explanation applies to the relief from Avignon, with which we began. That which Bazin considers the remnant of a raised knife is now seen to be the whip; in the (now lost) left hand, we may presume, were ears of corn and the thunderbolt. The question of establishing the relationship of the six busts must be left to those who can examine them upon the original, as the details in the illustration are not definite enough to be accurately studied. One point the relief from Marseilles teaches us clearly: the Zeus of Heliopolis was certainly youthful and beardless, and the testimony of Macrobius is thoroughly substantiated, which Lenormant was inclined to question (p. 81), since he believed he saw in the much injured relief from Nîmes traces of a bearded head in profile. At the same time, the interpretation which Imhoof-Blumer and Studniczka have given to several coins and engraved stones⁸ is assured, and a new parallel to the breastplate relief from Carnuntum (Studniczka, pl. 2, p. 61) is afforded us, which surpasses all hitherto known representations of Zeus Heliopolitanus, through its good preservation and rich relief decoration, a more accurate description of which will, it is hoped, advance our knowledge of the characteristics of the divinity. How these results affect the generally received view, that this Zeus is identical with Hadad, I must leave to the investigation of those who are better informed.

PAUL WOLTERS.

German Archaeological Institute,
Athens, April 6, 1890.

⁷ Cf. ROSCHER, *Lexikon der Mythologie*, i, 2, p. 1987 (DREXLER); p. 2900 (ED. MEYER); *CIL*, III, *Supplementum*, pp. 1313, 7280.

⁸ *Archäologisch-epigraphische Mittheilungen*, VIII, p. 62. The illustrations there cited are not accessible to me. DREXLER (p. 1993), on account of the beardless character of the representations, seems to be not quite sure of the interpretation.

PAPERS OF THE AMERICAN SCHOOL OF CLASSICAL
STUDIES AT ATHENS.
GREEK SCULPTURED CROWNS AND CROWN
INSCRIPTIONS.*

[PLATES XII, XIII]

The following notes are limited to the consideration of a very humble class of the monuments of Greek art. Of the marbles on which crowns are figured not one is noticed by a contemporary author; and there is probably not one made by a known artist. The crown, or wreath of honor, was doubtless developed from a badge of priestly office or a mere ornament, and became a reward conferred by the highest civic authority before the date of the earliest of these reliefs as yet known. From the beginning of the fourth century before our era until the beginning of the fourth century after it, there is now available a tolerably continuous series of such reliefs.

CROWNS.

The crowns are cut upon the flat surface of the marble, and the relief is almost always less than one cm. high. Sometimes the crown is quite without relief, and only the outline is incised on the marble with a sharp point. The *koilanaglyphic* method, too, is often employed for these reliefs: *i. e.*, the material is cut away from around the crown so as to leave it projecting in a slight depression, but not raised above the general level of the stone. When several crowns occur on the same monument or the same block of stone, they may be upon three sides of it; but more usually they occupy the face alone. When there are several on one side, they are placed at equal distances from each other in vertical or horizontal rows. The more usual arrangement is, however, the latter; and, when two or three crowns occur by themselves, they are almost invariably placed side by side, not one below the other.

* The collection of the material for this paper was encouraged by the following remark in BAUMEISTER's *Denkmäler*, p. 795: *Da über Kränze seit Pausanias [† 1685]. 'De Coronis' (Leyden, 1680) nicht mehr ausführlich gehandelt worden ist, so verdiente der Gegenstand, namentlich mit Rücksicht auf das in den Denkmälern vorliegende Material, eine erneute Untersuchung.*

The great majority of these crowns appear as though the original wreath had been made out of two pliable sprays or branches. The lower woody ends of these branches are loosely twisted so that one makes a complete revolution around the other, and the tips are then brought together so that the whole forms, approximately, a circle. The fillet (*taenia*) seems to have been the chief, as well as earliest, adjunct of the crown, and emphasized its religious association. Thus, probably in consequence of the sacred character of the national games, crowns given for victory in them are represented in the reliefs as bound with a fillet. On the other hand, crowns conferred on ordinary occasions by the State are always without the *taenia*. A few crowns awarded to the dead, as for instance the crown given to some who died in the Lamian war (*CLA*, II, 1681; PLATE XII-2¹), and, according to Böckh, certain crowns given by religious associations are, like crowns of victory, also adorned with fillets. Even for crowns of victory the fillet seems to lose its significance, and is sometimes omitted in the Roman imperial period (*Bull. de corr. hellén.*, x, 383; PL. XII-3, in part). The figured crowns differ greatly in their position. Some hang down, so that the tips of their sprays are below the twisted stems (PL. XII-2, 7, etc.) and so appear as if suspended against the stone; others stand erect, the tips of the sprays thus being uppermost (PL. XII-3, 5, 6) and the stem-ends downward. In the minor details of the carving there are naturally many differences. The number of leaves that a crown may have varies from twelve up to sixty or more. If the relief is low, the leaves are represented in outline as if they rested flat on the stone. When the relief is higher the leaves are sometimes shown in perspective, some being turned sidewise, or certain leaves may be represented as slightly curled. If the crown has many leaves, they may be more or less bunched together, and thus conceal the stem. In the more carefully designed wreaths, however, the stem is usually visible throughout its length, or is concealed at only one or two points by leaves lying directly upon it. A type peculiar to crowns of small size is that in which the leaves appear in groups of three at every node of the stem (PL. XII-10a, 11c; XIII-27). Here the group or whorl is represented as if flattened out so that the middle leaf of the three masks the stem. When the leaves are all separate from each other and the stem is visible in its entire length, more leaves are usually cut on the outside of

¹The crowns figured on PLATES XII, XIII are phototype reproductions made from squeezes of the reliefs. In every case the reduction is to $\frac{1}{4}$ th of the actual size.

the branch than on the inside (PL. XIII-17, 19), in order that all the leaves may be at about the same distance apart. In case the leaves are strictly opposite, those on the inside of the branch are made to diverge more from it than those on the outside (PL. XII-3, XIII-23). A special class of crowns (to be considered further on) have leaves standing out from the circumference of a circle like the rays of composite flowers (PL. XII-11*b-d*; XIII-25). Certain laurel crowns are arranged with three leaves and two berries at every node of the stem (PL. XIII-27). Ivy displays its usual cordate leaf, and sometimes a bunch of berries near the tips of the sprays (PL. XII-13*a, c*; XIII-21, 26*a*). The divided leaf identified as parsley or wild celery is represented in the crowns won in the Nemean games (PL. XII-3). The peculiar club-shaped foliage of a crown awarded for victory in the Isthmia is probably intended for pine (PL. XII-1). The presence of fruit or berries scattered among the leaves of a crown as well as ravelled threads at the ends of *taeniae*, is subject to no rule, and probably depended on the elaboration desired in the wreath, as well as on the ability of the artist. The same holds true of the carving of a midrib on some of the leaves. Such midribs are made in various ways: as by a single groove or by two small grooves leaving an elevation between them, or by a ridge sloping away on each side toward the margin of the leaf. The tips of the branches where leaves from opposite directions meet, are often finished in a rough manner. Sometimes a mass of small carelessly-made leaves are crowded together in confusion (PL. XII-9, 14*e, g*). Again, the terminal leaves may be made so that their ends touch each other and inclose a vacant space (PL. XIII-23, 30*a*). The stems of the sprays do not usually touch at their tips but sometimes they unite in a sort of button (PL. XIII-19), or they may join each other so as to form a circle (PL. XII-3, 6*b, 8*).

Besides the crowns in relief, Greek art supplies several instances of wreaths painted on marble. The general principle that decoration in color preceded carving might warrant the supposition that crowns were usually painted in the early periods, and so have been lost to us. The painted crowns that survive (*CIA*, II, 2541, and *Ἀθῆναιον*, VIII, 403) seem, however, to be not earlier than the Macedonian period. This fact, taken together with the comparative rarity of inscriptions which mention crowns before the time of the earliest crown-relief (388 B. C.), may be taken as evidence against a general prevalence of painted wreaths during earlier periods.

The crown occurs in general on two classes of monuments. The first class comprises those which are erected by some civic body or religious association which inscribes its honorary decree on it and accompanies the inscription with a representation of the crown it gives. Such crown-reliefs may from their source be termed public, to distinguish them from the private crowns of the second class, in which the interest lies not so much in the public giver as in the private receiver. This second class consists of the monuments of persons who had their crowns carved in order to record more specifically the honors they had received. Sepulchral steles, monuments dedicated to commemorate victory in the games, and many of those set up for the successful performance of all sorts of civil, military, and sacred duties, come under the second head. At times, both public and private crowns are figured upon the same stone. Thus, in addition to the crowns mentioned in an inscribed decree, other crowns may be sculptured which had been received at other times by the person honored and have no relation to the decree itself. Both classes of wreaths are only another evidence of the vivid plastic sense of the Greek people. The information which the figure of the crown conveyed to them could have been as well told in words, and, indeed, is often set forth in a brief inscription placed in or just above the crown; but it was sought to display the honor in material form to the eye. Public crowns bear, as their inscription, an abridgement of the decree conferring them. Often the name of the giver only is stated; but, when several persons are honored in the same decree, the crown of every one bears his name, and in some cases the name is preceded by the occasion of his receiving the honor—for the most part simply the name of an office or a title. Thus, a full presentation of all three elements would be: *ὁ δῆμος τὸν κοσμητὴν Θεόχαριν Ἐστιαίου*. The crowns of a private monument, since they usually belong to but one man, contain only the name of the giver and the cause of the honor, in this case generally expressed by a causal participle, as: *οἱ ἱππεῖς ἱππαρχήσαντα*. These three terms of a crown-inscription—giver, cause, receiver—are, however, rarely all present together. Any one of them, or all, may be omitted; they may be placed within the crown or just above it; and they may occupy different orders in regard to each other. Crowns of victory are characterized by another set of terms, the name of the games and the particular event in which the victory was won. Thus, *Ἀμφιάραια τὰ ἐν Ὀρόπῳ πυγμῇ* is an example of the typical elements of such crown-inscriptions. In the

case of public crowns, the material of which the crown is to be made is usually stated in the accompanying decree; but in private crowns it must be inferred from the shape of the leaves or the character of the giver. When the material is mentioned in a decree, it is usually gold. Often, too, its value is added, as 1,000, 500, 300 drachmai. Olive or *thallos* stands second in point of frequency. This was given chiefly at Athens, and then by small civil corporations and by religious associations, rarely by the *boule* and *demos*, unless to inferior personages or for trifling services. Ivy crowns usually have some connection with the worship of Dionysos. Laurel or, as it is often called, the "crown of the god" is given at Delphi, Rhodes, and other Doric centres. Myrtle, poplar, and grape-vine crowns seem to have been conferred very rarely, and complete the short list of materials mentioned in the inscriptions.

Any general description of figured crowns would be incomplete, if no effort were made to introduce a chronological standard by which some of the variations which have been noted might be placed in their order of succession. With the object of studying changes of form, a number of crown-reliefs found on the mainland of Greece are classified in TABLE I (pp. 89-91). First come reliefs that can be dated more or less exactly by some historical reference contained in the inscriptions. The others are such as furnish no historical data and are therefore grouped in classes based on differences in the shapes of the letters *alpha* and *sigma*.² These latter classes, since they somewhat overlap each other in time, can be expected to indicate only general tendencies. In the narrow column which contains only letters, *P* denotes that the crown has a pendent position, *E* that it is placed erect, *V* that it is a crown of victory; the next column on the right gives the diameter of the crown in millimeters, measured from the stem of one of the sprays to the stem of the other: the third column gives the diameter of the crown in terms of the height of the letters of its inscription.

It will be noticed immediately, on inspecting the table, that the erect wreaths contained in these classes belong exclusively to a period

²The general periods in which these forms of *alpha* and *sigma* were used are thus briefly given by REINACH, *Épigraphie Grecque*, pp. 204-7: *L'alpha n'a la barre médiane brisée que dans la deuxième moitié du second et au premier siècle av. J. C. . . . Ce n'est que vers la fin du 1^{er} siècle ap. J. C. que la forme A reparait avec fréquence, pour dominer de nouveau à l'époque de Trajan et d'Hadrien, sans jamais écarter complètement la forme brisée.*

Le sigma à branches parallèles . . . devient fréquent vers 110 av. J. C. et prédomine depuis le commencement du 1^{er} siècle. . . . Les formes lunaires du sigma ne commencent à prévaloir qu'à la fin du 1^{er} siècle avant notre ère.

later than the Christian era and to the ΣA and C groups. Among the earlier dated crowns and in the Ξ groups there is no such erect wreath to be found. The cause of this alteration in the position of the wreath seems not to be fully ascertained, but a comparison with wreaths represented on coins appears to throw some light upon it. The reverse of some of the earliest Attic coins bears a pendent wreath above the owl. On coins of the period 406-393 B. C. the erect wreath begins to make its appearance; and on the series of 220-197 B. C. the wreath has only the erect position. Probably the motive for this change in the manner of placing the wreath on the coins was merely artistic. The owl, the amphora, and other symbols seemed better supported if the wreath about them was erect, or, in other words, closed below. On certain coins of Sikyon the wreath is placed on its side, and has the opening in front of the flying dove, as if to avoid impeding its flight. Thus, the position of the wreath on coins may at first have been the natural one of suspension, and may have been altered later, to comply with the dictates of taste. On the other hand, in the case of the reliefs, the letters inclosed in the wreath would not appear to need any support, and hence the realistic placing of the wreath would naturally be retained much longer. The change in reliefs to the erect position of the wreath seems to correspond in point of time to the archaistic tendency of the second century A. D., and may perhaps be traced to the influence of the representations on coins. For, since the obverse in coins of the best period retained archaic types of human feature, it may have been supposed that the erect crown on the reverse was also quite as archaic. Thus, the carvers of these archaistic wreaths passed over all the reliefs of the fourth century B. C. and took as their model certain wreaths which they supposed to belong to the fifth century, and which were, in fact, stamped on Attic coins that bore heads of Athena derived from the fifth century or even earlier.² Besides the erect wreaths enumerated in the above classes, a large number of others have been found at Teuchira in the Cyrenaica and are published by Pacho, *Voyage dans la Marmarique et Cyrénaïque* and in the *CIG*, 5249, 5254-5356. It is believed that their system of dates can be

² Should this theory of archaistic crowns appear untenable, the erect position in the late reliefs may be explained as due to the increased size of the letters contained in the crown. The letters would thus have had the same influence in inverting the crowns of the reliefs as did the owl and amphora much earlier in the case of the crowns on Attic coins.

referred to the reigns of Augustus and Tiberius, and most of them have the C-shaped *sigma*. Le Bas (III, 358) publishes an erect wreath from Mylasa with the letters ΣΑ, and in the *Annali* of 1865 (pp. 97, 99) certain victories won in the second half of the second century of our era are recorded within erect wreaths. A very small erect wreath ornaments the pediments of certain steles, such as *Arch. Zeit.*, 1878, p. 98, belonging to 181-85 A. D., and 'Αθήναιον, III, 529 ff., of the time of the Antonines.

In the size of the wreaths there is no regular progression. The earliest are generally about 18 or 19 cm. in diameter, but among them are some as small as 14 cm. or even 11 cm. During the second and first centuries B. C. the wreaths are much smaller, averaging not above 11 cm. in diameter. This change is due, at least in part, to the confined space in which the crowns of this time are placed. *CIA*, II, 1217 (PL. XII-9) and *Mittheil.*, VIII, 211 (PL. XII-8) are good examples of crowding of this kind; though they belong to an earlier period. Late crowns of the time of the Roman Empire exhibit many irregularities, but show a general tendency to increase in size, and, consequently, in this particular approach the earliest reliefs.

But, although the diameter of crowns does not show any regular rate of change, a fondness for enlarging and crowding the letters is noticeable in the later crowns. Many cases occur where there are letters of one size outside the wreath, and of another size within. In such cases, it is evident that the size of the letters within the wreath is governed by the stone-cutter's desire to harmonize the letters and the wreath inclosing them, and not by any general rule prescribing the size of letters in inscriptions. If this feeling for proportion in size given to letters within a wreath was maintained when the letters outside were too large or too small to accord with the wreath, it was doubtless observed also when the letters without happen to be of the same size as those within. A means of expressing this proportion of size of letter to size of wreath is to divide the diameter of the wreath by the average height of the inclosed letters; and it is this ratio which is given in the last column of the table. Two exceptional cases ought, however, to be mentioned, before the general aspect of the column is considered. The first of these is *Mittheil.*, VIII, 211 (PL. XII-8), where, owing to lack of space, four crowns are made in such a way that their stems intersect, and thus some crowns lie partly over others. The other case is *CIA*, II, 1158 (PL. XIII-30). Here the unusual size (35

to 40 mm.) of the letters outside the crowns seems to have required large letters within, also. Moreover, the letters are not collected near the centre of the wreath, but are extended so that each word runs completely across it, and a line of six letters and one of nine or ten letters are thus made to fill equal spaces. Passing by these two exceptions, the dated crowns show a pretty regular diminution of the ratio from the upper end of the column downward. The ratio averages about 20 in the fourth century B. C., and a little over 10 in the second century, A. D. A considerable change seems to have taken place during the interval which separates the crown of 282/1 B. C. from that of about 150 B. C. An inspection of the ratio with reference to the letter-groups shows that in the ΣA class the ratio averages about 20, and never falls below 16; in the other classes, it averages about 14 and nowhere rises above 19.

Peculiarities in the shape of the wreaths are too various and irregular in their occurrence to admit of illustration by a table of measurements. A wreath of the earlier period, carelessly made but still quite characteristic, is one without any stem and having its exterior leaves strongly divergent. In such crowns the place of the stem is occupied by a course of leaves, so that any radius drawn within the wreath is almost certain to cut at least three leaves. *CIA*, II, 1596 (PL. XIII-24) of about 350 B. C. and three other wreaths of the dated group ending with *CIA*, II, 1291 (PL. XIII-28) of 282/1 B. C. show this form, as well as sixteen examples in the ΣA group; but in the other letter-groups it has no representative. A wreath having no stem but with many leaves is found in the latest period also, as *CIA*, III, 1108, and III, 1177 (PL. XII-4), of 212-21 A. D. Here, however, the leaves are not divergent but cling closely together and give the wreath a ring-like appearance. This peculiar form seems characteristic of late wreaths. It is well shown in *CIA*, III, 91 (PL. XII-5), where, though the stem is visible, the leaves are crowded together, so that their points seem to rest upon concentric circles. A reduction of the stem of a crown to an actual circle occurs quite early, as in *Mittheil.*, VII, 211 (PL. XII-8) of 325/4 B. C.; but rigid regularity in the arrangement of the leaves and the similarity in shape of all of them (PL. XII-6; XIII-22) are certain indications of decline in artistic spirit. The leaves are first subjected to a geometric regularity in those wreaths in which they are arranged in groups of three. This peculiar arrangement seems to belong to the last two centuries before our era. Among the dated crowns it is

represented by *Ἀθήναιον*, v, 522 (PL. XII-10) of 147 B. C., and by *CIA*, II, 465, 467 (PL. XII-11c), 481 of 48/2 B. C. The ΣA class supplies two instances, ΞA only one that is quite certain. The custom of representing laurel with groups of three leaves and two berries at every node of the stem, as seen in *CIA*, II, 552, of about 125 B. C. (PL. XIII-27), seems to belong to much the same period. The earlier laurel crown in *CIA*, II, 115 (PL. XIII-17b) of 343/2 B. C. is without these groups of three leaves, and differs from the olive wreath placed next it on the same stone (PL. XIII-17a) merely in having its opposite leaves cut a trifle broader. At a later date still than the groups of three leaves, there appears in the reliefs a type of wreath in which the leaves are placed exactly opposite each other as far as the tips of the sprays. *CIA*, II, 482 (PL. XIII-31), and, better, *Mittheil.*, III, 144 (PL. XII-6) are crowns of this form. ΣA supplies two instances, and again ΞA but one (*CIA*, II, 1347). The earliest crowns show an opposite arrangement of leaves near the butt-ends of the branches, but this system usually becomes alternate or irregular near the tips of the branches by the insertion of an extra leaf or leaves on the outside (PL. XIII-17a, 19). In another form exhibited in wreaths of this early period, the exterior leaves are made rather longer than those inside, so that the opposite arrangement can be continued close to the tips of the branches (PL. XIII-18, 23). The tips themselves in most of the early crowns bear smaller leaves than the other portions of the branch and the quantity of foliage near the tips is usually diminished, thus avoiding the ring-like appearance of the later examples.

Many crowns are distinguished in the accompanying inscription by the statement that they are of gold, and the question naturally suggests itself, whether there is any peculiar artistic mode of representing a crown of gold. In general, this must be answered in the negative. During the early period, the crowns which are recorded as of gold differ as much among themselves as from those which are stated to be of olive. Their similarity is best observed on such ephebic decrees as *CIA*, II, 470 of 69/2 B. C. and II, 482 of 39/2 B. C. In the former decree (PL. XII-13, 14) there are two rows of crowns across the face of the stone. The upper row contains five crowns, of which the three inner ones are, according to the inscription, of gold while the two at the extremities of the row are stated to be of ivy, and are, in fact, sculptured with ivy leaves. The lower row contains seven crowns, all stated to be of olive; but, except in size, these are exactly similar

to the three inner crowns of the upper row. In *CIA*, II, 482 (PL. XIII-31) even the difference in size is absent. The gold crown conferred upon the *epheboi* is exactly like the olive crowns given to their officers and instructors. In a somewhat earlier class of ephebic monuments the case seems to be different. Certain wreaths which have no leaves on the inner side of their branches, and whose leaves often project like rays, seem to be especially intended to represent gold crowns. Of this type are *CIA*, II, 594 of 127 B. C., II, 467 of about 100 B. C., and II, 471 of just before 69/2 B. C. In the first (*CIA*, II, 594 = PL. XIII-25) there is but one wreath, and this is ray-leaved, and is shown by its inscription to be a gold crown: in *CIA*, II, 471 (PL. XIII-15 gives the upper row only) the upper row contains five crowns. The first is a ray-crown whose title shows that it was given by the *boule* and *demos* to the *epheboi*; and the resolution according a crown of gold forms part of the inscription above. Similar ray-crowns given by both *boule* and *demos* and by the *epheboi* to the *kosmetes* (Dionysios), are also stated to be of gold. The fourth crown given by the *demos* to the *kosmetes* and *epheboi* jointly is of ivy, and in the inscription above it is mentioned, among the honors of the *epheboi*, a crown given by the *demos* in recognition of a sacrifice to Dionysos. The last crown in the upper row, given by the *boule* and *demos* to the *epheboi*, has olive leaves, but the material of it is not mentioned in the inscription. On the other hand, a gold crown, given to the *epheboi* by the *demos* of the Salaminians, is mentioned in the inscription, but is not distinguished in any way in the relief. In the lower row there are five olive-leaved crowns, all expressly set forth in the decree as of olive. In another ephebic inscription, *CIA*, II, 467 (PL. XII-11 gives the upper row only), the decree provides that gold crowns shall be given by *boule* and *demos* to the *epheboi* and to the *kosmetes*, and wreaths of olive to every one of the seven inferior officers. In the plastic representations of these crowns, those of the *epheboi* and the *kosmetes* have ray-leaves, but all the other crowns olive leaves. Besides these two ray-leaved crowns, the upper row contains a third ray-leaved crown given to the *epheboi* and *kosmetes* jointly by the *demos* of the Salaminians. Although this crown is not mentioned in the decree, it must, from the analogy of other crowns given by this *demos*, have been of gold. In *CIA*, II, 469 (PL. XIII-29 gives an example from each row) of about 100 B. C., one of the gold crowns given to the *kosmetes*, although not rayed, has no leaves on the inside of its branches, but the olive wreaths of the inferior

officers have leaves on both sides of the stem, as on the natural branch. Two crowns in *CIA*, II, 955 (PL. XII-12) present another case in point. The crown on the left (the place of distinction) has leaves only on the outside, but the crown on the right has leaves on both sides. Here, as in many other cases, the rayed-crowns are not distinguished by the inscriptions as gold crowns. From the several ephebic decrees examined above, however, it seems clear that at least during a certain period, perhaps limited to the first half of the second century B. C., there was an effort to distinguish crowns of gold from wreaths of olive by differences in their artistic representation. It is highly probable that, if the material of all rayed crowns were known with certainty, every one of them would be found to represent a crown of gold.

CROWN-INSCRIPTIONS.

Crown-inscriptions offer no such characteristic variations as the crowns to which they refer. Their peculiarities pertain to the field of epigraphy; but a cursory examination and classification of them may be of interest. As a basis for this, a table of crown-inscriptions is presented (TABLE II, pp. 91-95). Many of the inscriptions referred to in TABLE I are repeated, and the same division into classes is again used. The remarkable increase in the number of the ΣΑ class in the latter table is probably due in some measure to inexactness in the copies used for the *CIG*. The third column in this table gives the initial letters of the words *giver*, *cause*, *receiver*; and places in brackets those of them which are inclosed in the crown. Thus *g[er]* denotes that in the crown in question the name of the giver is outside the wreath, while the cause and the name of the recipient are within. Such collective words as *boule*, *epheboi*, *epimeletai*, are classed under receiver and not as cause, when any doubt arises as to which use the word has. A dash in the last column of the table shows that some word does not terminate at the end of its line, but is in part carried over to the line below.

An inspection of TABLE II shows that the placing of the terms with reference to the wreath falls into two classes. Either all the terms are inside the wreath, or some are within and others are without. The crowns of a certain Kassandros (*Arch. Zeit.*, 1855, p. 33) and crowns in *CIA*, II, 1213, II, 480, *Bull. de corr. hellén.*, IV, 516, and *Le Bas*, II, 1338, where the giver is placed above and the crowns themselves are left empty, seem to be almost the only exceptions to these two

divisions. Examples in which some of the terms lie outside the wreath are much more rare than those in which all the terms are inside. Terms outside are found mostly in the public and, consequently, dated inscriptions. They seem to begin about 150 B. C., are rare in the ΣA class, more frequent among the ΞA and ΣA classes, but are wholly lacking, later, in the ΣA and C classes; although one instance occurs among the dated crowns as late as about 100 A. D. Most of these terms outside of the crown belong to Attic ephebic inscriptions. A count of the whole TABLE shows that there are 182 instances of a single term inclosed in the wreath; or, to represent the number of terms inside and outside of the wreath by numbers and their position within or without by brackets, there are 182 instances of [1], 51 of [2], 12 of [3], 15 of 1[1], 5 of 1[2], and 6 of 2 [1]. In respect to the kind of term found outside, the following may be stated. The receiver when present is never outside the wreath; the cause is rarely outside (7 cases); but the giver somewhat more often (19 cases). Crowns that have but one term occur as often in the earliest as in the latest periods. Most of them are private inscriptions, and the mortuary crowns from Smyrna and the Cyrenaica constitute a large part.

Many of the earliest crowns that are at present known are not explained by even a single term. From this, the first step of advance was naturally the insertion of one term, the name of the giver. The latest crowns also contain only a single term; but with the difference that this term is not restricted to the name of the giver, but in many instances stands for the receiver. The occurrence of two terms is, generally speaking, contemporaneous with that of three terms, and often both cases are found on the same stone. They occur chiefly in Attic ephebic inscriptions; and, like the cases where terms are placed outside the wreaths, are only another evidence of that general fondness for prolixity and accumulations which these inscriptions exhibit.

In crowns of victory one term, the name of the games, is always present, and sometimes the name of the special event is added as a second term. There are but three instances of a separation of these terms. *CIA*, II, 1318, 1319 place the games outside, and the event inside, the crown; *CIA*, III, 115, on the contrary, places the event outside and the games within. During the Roman imperial period, the name of the town at which the games were celebrated is sometimes added, presumably for the reason that games of the same name were celebrated in more than one place. Examples of this are *CIG*, 5916, *Ἐφεσον* | *Ἀδριανεῖα* ἂ; 5915, *Ὀλύμπια ἐν Ἀθήναις*.

To return to the ordinary crowns; the three terms—giver, cause, receiver—are regularly in this order, and, as any of them can be omitted, the following cases occur in which the terms do not deviate from the regular order, *ger*, *ge*, *gr*, *er*, *e*, *g*, *r*. In regard to frequency, *g* stands at the head with 122 instances; then *r* with 51; *gr* with 38; *ge* with 17; *ger* with 15; *e* with 9; and *er* with 4. Besides these cases of regular order, a few irregularities are found: there are 6 cases of *gre*, 6 of *rg*, and one of *re*. The exceptional form *gre* occurs four times on certain Parian inscriptions; here the term *e* is represented usually by the phrase *κοσμίως βίωσαντα*, so that this order seems to be rather a local peculiarity. One of the instances of *rg* is from a sepulchral inscription at Smyrna, but all the other exceptions to the usual order are Attic.

Two bodies may act in unison in bestowing a crown; as in *Bull. de corr. hellén.*, iv, 433, where the words *ὁ δᾶμος καὶ οἱ ῥωμαῖοι* appear in one of the crowns: *οἱ ἔφηβοι καὶ οἱ νέοι*, *CIG*, 3112, is another example. A psephism of the *boule* and *demos* is also often represented by one crown. More rarely such a decree has two crowns, one inclosing *ἡ βουλὴ*, the other *ὁ δῆμος*, as in *Mittheil.*, viii, 211 (PL. XII-8) and probably in *CIA*, II, 1347. The form in which both words are used in a single crown is especially frequent in ephebic decrees, but it occurs as early as the votive inscription relating to Demetrios Phalereus *CIA*, II, 1217 (in part PL. XII-9). When both words belong to one crown, they may stand inside or outside of it, according to convenience. The custom, however, is to place them within; for, putting aside the cases where the position varies on the same stone, the words *boule* and *demos* occur 25 times inside the crown, out of a total of 32 examples. Sometimes the two words are joined by the copula *καί*, but the omission of it seems to be the older and the Attic usage. *CIA*, II, 1217 (315/12 B. C.), II, 338 (soon after 281 B. C.), and thirteen other examples of *ἡ βουλὴ ὁ δῆμος* include eight inscriptions belonging to the ΣA class. On the other hand, the earliest approximately dated example of *ἡ βουλὴ καὶ ὁ δῆμος* is *CIG*, 2270 (soon after 167 B. C.); and, of sixteen other instances of it, only two belong to the ΣA class; while three cases of the C-shaped *sigma* occur among them. Moreover, more than half of the cases of *ἡ βουλὴ καὶ ὁ δῆμος* are supplied by Paros, Aigina, and other islands; while *ἡ βουλὴ ὁ δῆμος* is confined to Attika.

When the *demos* alone is the giver, *ὁ δῆμος* is placed with great regularity within the wreath. In only 14 cases out of 155 does it lie

outside, and here its position can almost always be explained by analogy with other crowns in the same row. *Boule* as giver stands within its crown in 34 cases out of a total of 45. Of the other divisions of the Athenian State, *οἱ πρυτάνεις* and *ἡ φυλή* vary in their position, *οἱ φυλέται* and *οἱ δημόται*, though occurring but rarely, are always inscribed within the crowns conferred by them. Other associations, also, whether religious or civil or military, when they bestow crowns place their names within, as a rule; but such associations are too numerous to call for separate notice of every one.





In crowns of early periods, the name of the giver is always in the nominative case, the cause and the receiver in the accusative. The verb understood is probably to be supplied from the common formula in decrees, *στεφανῶσαι αὐτὸν χρυσῷ στεφάνῳ*, but sometimes the verb is expressed. Thus, in several crowns from Paros (*CIG*, 2380, 2381) and in one from Lydia (*Bull. de corr. hellén.*, XII, 473), a complete sentence, *ἡ βουλὴ καὶ ὁ δῆμος στεφανοῖ . . .*, is brought within the crown. The verb *ἐτίμησε* is used in *CIG*, 1942, and *Bull. de corr. hellén.*, IV, 68, but the verb is omitted in far the greater number of crown-inscriptions. The nominative case of a proper noun placed within a crown denotes the receiver in *CIA*, II, 1334 and *Bull. de corr. hellén.*, III, 388, as express statements to this effect are added. The nominative, in crowns figured on a large number of sepulchral monuments found in the Cyrenaica, probably stands also for the receiver. A nominative, presumably for the receiver, is found in late ephebic inscriptions, as *CIA*, III, 1042, in dedications to Apollo *ὑπ' ἄκρας*, as *Mittheil.*, III, 144, and in certain late crowns containing titles of various magistrates, as *CIA*, III, 91 (PL. XII-5) *πολέμαρχος*, and III, 1108. The earlier instances of these nominatives come from the Islands, but their occurrence extends over both the Σ and Γ forms of *sigma*. Crowns connected with the name of a god, such as *Arch. Zeit.*, 1878, p. 98, where a small empty wreath separates the words *Διὸρ ἱερά*, or where a wreath incloses the word *Ζεὺς* (*Le Bas*, III, 2702), or *ἀγαθὴ τύχη* (*Le Bas*, III, 2431), belong to a very late and peculiar type of crown-inscription. The meaning of the crown is uncertain, but probably it is used as a sign of consecration. A genitive case in or just above a crown, if it is a proper noun—as in Curtius' *Samos* (p. 34) *Σάμου*, *Τίμωνος*, κ. τ. λ.—denotes the receiver of the crown. The name of an assembly, if in the genitive, belongs presumably to the giver, as *γερουσίας*, *CIG*, 4152 c, and certainly *ὑπὸ τοῦ δήμου*,

Le Bas, II, 1338. When a crown-inscription consists of a noun in the dative case, it is naturally to be understood of the receiver. The few cases that occur are late and for the most part from near the outskirts of Greek civilization: στρατηγήσαντι, *CIG*, 2097 (Tauric Chersonese), 5053 (Nubia), *Bull. de corr. hellén.*, XII, 483 (Phrygia), *CIG*, 3614 (Troad). These irregular nominatives and datives show that the original function of the crown-inscription is becoming obscured. In a small class of equally late inscriptions, the words within the crown lose still more their proper function of explaining the crown to which they belong. Thus, in *CIA*, III, 1177 (PL. XII-4a, b), the lines of the crown-inscription are to be read across from one crown to the other. In *Mittheil.*, III, 144 (PL. XII-6a), one of the crowns contains a date. *Bull. de corr. hellén.*, VII, 132 gives a case where the last two words of the phrase νεώκορος | τοῦ Ἀπόλλωνος are inclosed in a wreath. Perhaps the most peculiar case of irrelevancy in a crown-inscription is *Le Bas*, III, 722. In this, a sepulchral inscription from Asia Minor, the lines of the text run across the crown and lie also on both sides of it, so that the sentence, ὃς ἂν ἀνύξει, θήσει | εἰς τὸ ταμίον δηνάρια χίλια, has the words ἀνύξει, ταμίον and the letters -λια inclosed within the crown.

Crown-inscriptions in which a word is divided next call for notice. This division of words has a somewhat close relation with the ratio between the size of the crown and the size of the inclosed letters. For, where a word is placed in an inclosed space, the number of lines it occupies must largely be controlled by the size of its letters, and by the amount of space in which it can extend itself. Consequently, when the ratio, considered above, shows a tendency to decrease, the number of divided words ought at the same time to increase. From the last column of the dated crowns of TABLE II, it can be seen that before 200 B. C. the division of a word is merely sporadic. During the last two centuries before our era it shows considerable increase, and under the Roman Empire becomes almost an established rule. Among the classes of *sigma*, the frequency of divided words is as follows: 65 crown-inscriptions of the Σ class give 9 with divided words, 95 of the Σ class give 49, and 17 of the C class give 13; making 14, 52, and 76 per cent. respectively for the three *sigma*-classes. In these instances of the division of a word, the general rules for the separation of syllables in Greek are pretty strictly followed. A single consonant (including a mute + a liquid) goes with the following vowel,

as στρατηγῆ|σαντα, Δημῆ|τριος. The exceptions to this rule are only 21 against 275 cases of accordance with it. Many of the crown-inscriptions consist of the words ὁ δῆμος, and the usual method of division is then ὁ δῆ|μος (twice, however, ὁ|δῆμ|ος and ὁ δῆμ|ος, and once ὁ|δῆμος). Where two consonants occur at the point of division, one goes with the preceding, the other with the following vowel, as ἀρ|χοι-τος. This is found in some 57 cases, but to this rule there are 20 exceptions. A mute and a liquid are left undivided in 25 cases out of a total of 26. Such barbarisms as Λαμπριέως (*Mittheil.*, III, 144; *PL.* XII-60), Φιλύα (*CIA*, III, 1297), πάντες (*CIG*, 3112) belong, as might be expected, to a rather late period; though such divisions were necessarily common enough in the early στοιχιδόν inscriptions.

ARRANGEMENT OF THE CROWNS.

A wider field for investigation than the inscriptions, or even than the forms of the crowns themselves, is found in the order or system of placing the wreaths on the monuments. This arrangement is the question first determined by the stone-cutter on beginning his work. Although the results given below may seem meagre and uncertain, this is not the least important side from which to study the subject in hand. As has been stated, the usual arrangement of crowns on the monuments is in straight lines. Fourteen crowns ranged in two horizontal rows of seven each, and eight in two vertical rows, constitute extreme examples of this system. Besides this linear arrangement, there occur a few instances of crowns placed in other relations. This is shown, especially, when there is an uneven number of wreaths, and they are ranged in two vertical columns, with the odd wreath below the others, thus , as in *Bull. de corr. hellén.*, III, 388 and *CIA*, II, 1334. A peculiar arrangement of four crowns  is found in *CIA*, III, 916, and of seven crowns  in *CIA*, II, 329. The quincunx  seems to occur in but a single example, and this dates from the Roman period. The geometric arrangement of the wreaths, and probably often their number, was to a great extent determined by the shape of the stone and the amount of space left after the inscriptions had been cut upon it. When, however, the crowns are bestowed by different corporations, or received by different persons, there arises a new question concerning the mutual relations of the crowns within their geometric figure. In most cases where this figure, so to speak, has been preserved entire, and information concerning every crown is

accessible, the most important crowns seem to occupy the most prominent positions. Two positions may be considered prominent in this sense—either the left-hand extremity of a row of crowns, or the middle. The importance of a crown may be derived from its giver. Thus, in 'Αθήναιον, v, 522 (PL. XII-10, in part), two crowns given jointly by the *boule* and the *demos* of Athens precede two given by the *demos* of Troizen. In *Mittheil.*, VIII, 211 (PL. XII-8), two crowns given by the *demos* come before two given by the *boule*. In *CIA*, II, 562, the crown given by the *boule* is above one given by the *phyle*. Again, in *CIA*, II, 420, a crown given jointly by the *boule* and the *demos* stands before one given by the *demos* alone. In *CIG*, 2140 a¹, a crown conferred by the *boule* and *demos* jointly, precedes one given by certain *οἱ ἐκ τοῦ γυμνασίου*. Where the giver is the same but the recipients are different, the relative importance of the latter may determine the order of precedence of the crowns, as in Curtius' *Samos*, p. 34, where the crown received by the *demos* of the Samians stands before those of Samian *dikasts*. On this principle, the upper row of crowns in many ephebic inscriptions is reserved for the *epheboi* and *kosmetes*, the lower row for the inferior functionaries. The service rendered may also give special importance to a crown, when for two or more crowns both giver and receiver are the same. Thus, a crown containing ὁ δῆμος|στρατη-|γήσαντα precedes one containing ὁ δῆμος|πολίτας|λυτρωσάμενον in *CIG*, 2375; and in a monument erected at Athens to an *archephoros* (*CIA*, III, 916) her crown for the performance of this duty precedes that given for services in the Eleusinia and Epidauria. In the ephebic inscriptions, the material of the crown influences its position, a condition perhaps due to the scarcity of gold during this period. *CIA*, II, 471 (PL. XIII-15) is a good example. In the upper row of crowns the following order is found: (1) a gold crown given by *boule* and *demos* to the *epheboi*; (2) a gold crown by *boule* and *demos* to the *kosmetes*; (3) a gold crown by the *epheboi* to the *kosmetes*; (4) an ivy crown; (5) an olive crown. In *CIA*, II, 465 and 469, a similar arrangement seems to have prevailed, but the information contained in the inscriptions is not sufficient to verify the supposition.

Hitherto, only crowns placed at the left-hand or at the upper end of a row have been examined. *CIA*, II, 470 (PL. XII-13) is a case where the more important crowns are placed in the middle of the line. In the upper row the crowns are in the following order: (1) an ivy crown given by the *boule* and *demos* to the *kosmetes* and *epheboi*;

(2) a gold crown by the *boule* and *demos* to the *epheboi*; (3) a gold crown by the *boule* and *demos* to the *kosmetes*; (4) a gold crown by the *demos* of the Salaminians to the *kosmetes*; (5) an ivy crown by the *boule* and *demos* to the *kosmetes* and *epheboi*. On the same principle, in *CIA*, II, 467 (PL. XII-11), an ivy crown begins the line, and an olive crown concludes it; while three gold crowns are placed between them. In *CIA*, II, 329, a crown by the *demos* to the *prytaneis* stands between two crowns awarded by less important bodies. *CIA*, II, 454 and *Bull. de corr. hellén.*, IV, 175 seem other examples of this central position of the important crown; and the general principle is also applied in arranging the crowns on the monument described in *Mittheil.*, IX, 49.

When several crowns are equally important, they may be arranged in various symmetrical positions. In *CIG*, 2270, five crowns given by the *boule* and *demos* for services to the State are arranged so as to form the four corners of a rectangle, as well as the middle point of its upper side. The middle points of the other sides and the centre of the rectangle are composed of crowns received for priestly services. In *Bull. de corr. hellén.*, VII, 469, two crowns given by *demoi* form the extremities of the upper row; but the centre of it and the entire lower row are crowns given by an association of certain traders and shippers. In *Bull. de corr. hellén.*, IX, 268, in a long list of services for which crowns were given, an embassy is placed at each end of the upper row and at the centre of the lower one. The quincunx, mentioned above, has in its centre a crown given by the *demos* of the Athenians, and, around it, four crowns given by the *demoi* of several islands.

Thus far, importance in general estimation has been considered. But, when any corporation erected a monument on which were cut crowns given by them, as well as those given by others, they often put their own crowns in the most prominent place. Thus, in the inscription in honor of Demetrios Phalereus (*CIA*, II, 1217), Athenian garrisons stationed at Eleusis, at Panakton, at Phyle, place their crowns even before those of the *boule* and *demos*. In *CIA*, II, 1158, the *boule* places several crowns given by itself to certain individuals before a crown given by the *demos* to the *boule*. Another exceptional arrangement occurs in cases where a crown of the *boule* stands before an exactly similar one of the *demos*. Thus, in *CIA*, II, 1347, a crown contains ἡ βουλὴ | Θεομένης Οἰῆθεν | εἶπεν, and immediately below it is another inclosing ὁ δῆμος | Θεομένης Οἰῆθεν | εἶπεν. So, also, in *CIA*, II, 1530, the two crowns ἡ βουλὴ, ὁ δῆμος probably have this relative

position, because this was the order in which the resolutions for them were passed. In *Annali*, 1865, p. 97, the crowns of victory are arranged in the order in which they were won. Thus, first come the games for children (παῖδες), then, those for youths (ἀγέεστοι), finally, the contests called *iepai*. Besides such cases, there is little other evidence that the chronological order was ever preferred to that of their relative importance. Often, indeed, there seems to be no possible clew for explaining the order, but in such cases this is for the most part due to lack of information concerning the crowns, or to their incomplete preservation. Thus, it seems difficult to explain the order of victories recorded in 'Εφημερίς, 2558, or in *CIG*, 5919. In the latter instance, however, certain victories διὰ πάντων are observed to form the first and the last of the series. In *Annali*, 1865, p. 99, the uppermost crowns are for games won in Greece, next comes one for a victory in Italy, and at the end are those won in Asia. On other monuments bearing crowns of victory the four great games, Olympian, Pythian, Isthmian, Nemean, occur thus, in the order of their rank. Examples are *CLA*, II, 115, 'Ολύμπια Πύθια, from the year 343/2 B. C.; *CLA*, III, 758a gives the first three and a vacancy is left at the end, to be filled, doubtless, by Νέμεα. In honorary inscriptions at Athens, there is a tendency to place the crowns won in Attic festivals in prominent positions. On the base of the monument of Nikokles (*CLA*, II, 1367), sixteen crowns form a single band around three sides of the stone: on the face are six crowns won in the Pythia; but between the third and fourth, and exactly in the middle of the face, are placed crowns from the Panathenaia and Lenaia. In *CLA*, II, 1319, the Eleusinia, Panathenaia, and Delia are all placed above such Doric festivals as the Olympia, the Soteria at Delphi, and some games held at Dodona; but a great part of the stone is lost. So, also, in the case of some victories won at Ephesos (*CIG*, 5916), local interest probably causes the *Ephesia* to precede the *Hultriancia* and *Barbilleia*.

As a conclusion to this paper, a brief summary of its results may be of service. (1) In regard to the form of the wreaths, it has been shown that only the pendent crown belongs to the better periods of Greek art, and that the erect crown, on stone monuments at least, first appears in the time of Trajan or of Hadrian. The influence of repre-

sentations on coins has been suggested as a theory to account for this change of position; and a tendency to crowd and enlarge the letters in the later reliefs has been noticed. Certain varieties of form in stem and leaves are found to belong to fixed periods; and a peculiar ray-like arrangement of the leaves has been shown to denote a crown of gold.

(2) An investigation of crown-inscriptions has shown that these consist of one, two, or even three terms placed regularly in the order of *giver*, *cause of the gift*, and *receiver*. Instances where some of the terms are found outside the crown belong mostly to the second or first century before our era, and instances of three terms have been shown to belong to the same period. The use of a verb in a crown-inscription, as well as certain ambiguities that might arise from the use of the nominative and genitive cases of nouns, are of only sporadic occurrence. The division of words in a crown-inscription increases with the advance of time, but in all periods is carried out with considerable attention to the syllables of the word divided.

(3) In the arrangement of crowns on the monuments, two positions, either the left-hand extremity or the middle, have been found to give special emphasis to the crowns placed in them. Moreover, the wreaths which occupy these positions are usually the most important by reason of the rank of their giver, or the value of the service for which they have been conferred.

GEORGE B. HUSSEY.

*American School of Classical
Studies at Athens.*

TABLE I.
(TABLE OF GREEK SCULPTURED CROWNS.)

APPROXIMATELY-DATED CLASS.

REFERENCES.	DATE.	POSITION (pendent or erect).	DIAM- ETER.	RA- TIO.
<i>CIA</i> , II, 1185	about 378/7 B.C.	P	.175	16
II, 51	369/8	P	.185	23
II, 72	353/2	P	.155	22
II, 1174	351/0	P	.200	20
II, 1596	about 350	P	.180	26
II, 1156	343/2	PV	.165	18
II, 872	341/0	P	.195	20
II, 121	338/7	P	.140	18
II, 165	soon after 335	P	.180	26
II, 166	" " "	P	.175	18
<i>Mittheilungen</i> , VIII, 211	325/4	P	.105	14
<i>CIA</i> , II, 1681	322	P	.280	25
II, 1187	319/8	P	.180	23
II, 1217	315/12	P	.110	18
II, 243	307/1	P	.180	26
II, 611	300	P	.180	40
II, 613	299/8	P	.180	23
II, 1350	296/5	P	.160	23
II, 300	295/4	P	.250	25
II, 1158	about 285/4	P	.255	13
II, 1291	282/1	PV	.160	24
II, 1642	about 150	P	.170	17
II, 550	soon after 150	P	.130	18
<i>Ἀθήραιον</i> , V, 522	147	P	.090	14
<i>CIA</i> , II, 594	127	P	.125	14
II, 552	about 125	P	.165	17
II, 465	just before 100	P	.085	17
II, 469	about 100	P	.095	16
II, 467	" "	P	.085, .070	12, 11
II, 471	just before 69/2	P	.100, .080	17, 13
II, 470	69/2	P	.120, .095	16, 14
II, 481	48/2	P	.105	15
II, 482	39/2	P	.085	9
<i>Mittheilungen</i> , III, 144	about 100 A.D.	E	.155	10
<i>CIA</i> , III, 735a	" " "	P	.100	11
III, 1108	117-29	E	.145	17
<i>Bull. de corr. hellén.</i> , x, 383	after 117	EV	.130	10
<i>CIA</i> , III, 91	" "	E	.180	9
III, 1177	212-21	E	.110	10

ΣΑ CLASS.

REFERENCES.	POSITION (pendent or erect).	DIAM.	RATIO.	REFERENCES.	POSITION (pendent or erect).	DIAM.	RATIO.
<i>CIA</i> , II, 149	P	.145	24	<i>CIA</i> , II, 1367	PV	.150	21
II, 219	P	.190	19	II, 1400	P	.140	18
II, 229	P	.120	20	II, 1449	P	.170	19
II, 298	P	.160	23	II, 1530	P	.190	17
II, 326	P	.130	19	<i>Εφημ.</i> '84, p. 187	P	.150	21
II, 420	P	.160	23	RANGABÉ, 1148	P	.190	19
II, 513	P	.105	18	<i>B. c. h.</i> , III, 485	P	.170	24
II, 568	P	.145	21	VII, 471	P	.185	21
II, 604	P	.180	23	* I	P	.150	21
II, 1334	P	.140	23	II	P	.140	23
II, 1342	P	.190	23	III.	P	.145	21
II, 1342	P	.340	16	IV.	P	.160	27
II, 1347	P	.155	22	V.	P	.165	24
II, 1351	P	.125	21	VI	PV	.150	23

ΣΑ CLASS.

<i>CIA</i> , II, 624	P	.150	21	<i>CIA</i> , II, 1358	P	.100	17
II, 955	P	.090	11	<i>Εφημ.</i> 915	PV	.110	14
II, 1357	P	.135	17	VII	P	.160	15

ΣΑ CLASS.

<i>CIG</i> , 2140a ¹	E	.140	13	<i>Ἀθηναίων</i> , VIII, 294	P	.175	19
2322b ¹⁰	P	.245	13	<i>Arch. Zeit.</i> '79, p. 140	PV	.250	16
<i>CIA</i> , II, 1388b	P	.095	12	VIII.	P	.115	15
III, 115	PV	.100	11	IX.	E	.175	16
III, 916	P	.125	14	X.	P	.170	15
LE BAS, II, 1707	P	.150	10				

ΣΑ CLASS.

C CLASS.

<i>CIA</i> , II, 2169	P	.175	6	<i>CIA</i> , III, 3098	P	.220	9
				XI	EV	.063	4

* The place of publication of crowns marked with Roman numerals is at this time unknown to the writer: a short description of these crowns is therefore added, to assist the reader in their identification.

- I. Athens, near the Central Museum, on the face, two crowns inclosing ἡ βουλὴ, ὁ δῆμος, on the right side, another crown inclosing οἱ δημόται.
- II. Athens, Akropolis, crown inclosing Μνησίθεον|οἱ δημόται.
- III. Athens, Central Museum, three crowns inclosing Μ[ο]δέστου, Φιλίπ[που], and Ἀντιόχου, respectively.
- IV. Athens, southern side of the Akropolis, two crowns, one of which incloses ὁ δῆμος|ὁ Κολοφώνιον|καὶ πολιτεία.
- V. Athens, southern side of the Akropolis, two crowns inclosing ὁ δῆμος[s and οἱ φ]υλάται.
- VI. Athens, southern side of the Akropolis, three crowns, each on a different side of the stone, inclosing respectively Δήλια, Ἐλευσίνια, and Παναθήνα[ια]|τὰ μεγάλα.
- VII. Athens, Central Museum, crown inclosing τὸν δῆμον τὸν Ἀθηναίων and, above, τὸ κοινὸν τῶν Ἀμφικτυόν[ων].
- VIII. Eleusis, two crowns inclosing . . . κα[ν]ηφορήσ[α]σαν Μη[τρ]ῖ Θεῶν and ἡ βουλὴ|ὁ δῆμος|κανηφορήσ[α]σαν Ἀφροδίτη Ἀλω[πεκῆ]σι.
- IX. Athens, Central Museum, parts of three crowns, one incloses . . . εἰνος (PL. XIII-16).
- X. Athens, Central Museum, crown inclosing Σώσανδρον|Φιλίστου|Συπαλλή[τ]τιον.
- XI. Larissa, two crowns marked respectively Ἀδρι[άν]ια and Ὀλύμπια.

TABLE II.

(TABLE OF CROWN-INSCRIPTIONS.)

APPROXIMATELY DATED CLASS.

REFERENCES.	DATE.	GIVER, CAUSE, RECEIVER.	
CIA, II, 1185	about 378/7 B. C.	[g.]	
II, 1174	351/0	[g.]	
II, 1596	about 350	[g.]	
II, 1340	346/5	[gc]	—
II, 1341	344/3	[g.]	—
II, 1156	about 344/3	[g.]	
II, 872	341/0	[g.]	
II, 562	339/8	[g.]	
II, 121	338/7	[rg]	

APPROXIMATELY DATED CLASS—Continued.

REFERENCES.	DATE.	GIVER, CAUSE, RECEIVER.	
<i>CIA</i> , II, 165	soon after 335	[gr]	
II, 166	" " "	[g]	
II, 1216	332/1	[ger]	
II, 1186	329/8	[g]	
<i>Mittheilungen</i> , VIII, 211	325/4	[g]	
<i>CIA</i> , II, 1187	319/8	[g]	
II, 1217	315/12	[g], [gc]	
II, 611	300/299	[gr]	
II, 1350	296/5	[gr]	
II, 300	295/4	[g]	
II, 1158	about 285/4	[r], [gr]	
II, 311	286/5	[g]	
II, 1291	282/1	[o], [gc]	
II, 338	soon after 281	[gr], [ger]	
II, 331	about 272	[g]	
<i>Bull. de corr. hellén.</i> , IV, 47	soon after 168	[r]	
<i>CIG</i> , 2270	" " 167	[g], [r]	
<i>Bull. de corr. hellén.</i> , IV, 164	172/50	[g]	
<i>CIA</i> , II, 550	soon after 150	[g], [r]	
<i>Ἀθῆναιον</i> , V, 522	147	[g], [e]	
<i>CIA</i> , II, 594	127	[g], [re]	
II, 552	about 125	[g], [r]	
II, 465	just before 100	[g], [r], [g], [c]	
II, 595	" " "	[g], [r]	
II, 469	about 100	[ger], [gr]	
II, 467	" "	[g], [er], [gc], [r], [gr]	
II, 471	just before 69/2	[gc], [r], [g], [r], [r]	
<i>CIG</i> , 2349b	about 70	[gr]	
<i>CIA</i> , II, 470	69/2	[g], [er], [gc], [r], [g], [r]	
II, 481	48/2	[gc]	
II, 482	39/2	[g], [r], [gc], [r]	
<i>Bull. de corr. hellén.</i> , VI, 495	about 7 A. D.	[g]	
<i>CIG</i> , 5249	24 B. C.—36 A. D.	[r]	
5254	" "	[r]	
5255	" "	[r]	
5262	" "	[r]	
5270	" "	[r]	
5274	" "	[r]	
5277	" "	[r]	
5282	" "	[r]	
5301	" "	[r]	
5312	" "	[r]	
5313	" "	[r]	
5315	" "	[r]	

APPROXIMATELY DATED CLASS—Continued.

REFERENCES.	DATE.	GIVER, CAUSE, RECEIVER.	
<i>CIG</i> , 5331	24 B. C.—36 A. D.	[r]	—
5337	" "	[r]	—
5343	" "	[r]	—
5352	" "	[r]	—
5353	" "	[r]	—
5354	" "	[r]	—
5355	" "	[r]	—
5356	" "	[r]	—
<i>Bull. de corr. hellén.</i> , ix, 273	70–80 A. D.	[gc], [c]	—
<i>Mittheilungen</i> , iii, 144	about 100	[cr]	—
<i>CIA</i> , iii, 735a	" "	[gc], [r]	—
iii, 1108	117–29	[r]	—
iii, 91	after 117	[c]	—
<i>Bull. de corr. hellén.</i> , ix, 268	131–53	[c]	—
<i>CIA</i> , iii, 1042	about 175	[r]	—
iii, 1177	212–21	[g], [r]	—

ΞA CLASS.

REFERENCES.	GIVER, CAUSE, RECEIVER.	REFERENCES.	GIVER, CAUSE, RECEIVER.
<i>CIG</i> , 1687	[g]	<i>CIA</i> , ii, 1312	[g]
<i>CIA</i> , ii, 149	[g]	ii, 1331	[gr]
ii, 157	[g]	ii, 1334	[r]
ii, 209	[g]	ii, 1342	[gr]
ii, 218	[g]	ii, 1344	[g]
ii, 219	[gr]	ii, 1345	[gc]
ii, 220	[gr]	ii, 1346	[gr]
ii, 298	[gr]	ii, 1347	[g]
ii, 326	[g]	ii, 1351	[gc]
ii, 331	[g]	ii, 1352	[r]
ii, 369	[g]	ii, 1355	[c]
ii, 400	[gr]	ii, 1431	[g]
ii, 420	[gr], [gr]	ii, 1449	[r]
ii, 513	[cr]	ii, 1530	[g]
ii, 568	[gr]	ii, 1968	[r]
ii, 587	[g]	Εφημ., No. 995	[g]
ii, 861	[cr], [gr]	1884, p. 187	[gr]
ii, 869	[gr]	RANGABÉ, 1148	[g]
ii, 987	[r]	<i>Hermes</i> , viii, 417	[g]
ii, 1199	[g]	<i>B. c. h.</i> , iii, 62	[g]
		iii, 372	[g]

ΣA CLASS—Continued.

REFERENCES.	GIVER, CAUSE, RECEIVER.	REFERENCES.	GIVER, CAUSE, RECEIVER.
<i>B. c. h.</i> , III, 388	[r]	<i>Mittheil.</i> , XIII, 389	[g]
III, 485	[gr]	I.	[g]
VII, 69	[gr]	II.	[rg]
X, 102	[gr]	III.	[r]
XIII, 370	[gr]	IV.	[g]
<i>Mittheil.</i> , VI, 360	[g]	V.	[g]
XIII, 339	[g]		

ΣA CLASS.

<i>CIA</i> , II, 454	[r]	<i>B. c. h.</i> , IV, 173	[r]
II, 624	[gr]	IV, 213	[g]
II, 1358	[c]	IV, 285	[gr]
II, 1388	[c]	IV, 433	[g]
II, 1419	[g]		
<i>B. c. h.</i> , III, 372	[g]	VII.	[r]

ΣA CLASS.

<i>CIG</i> , 1942	[gr]	<i>CIA</i> , III, 1297	[r]
2140a	[gr]	LE BAS, II, 1707	[g]
2380	[gr]	III, 13	[g]
2427	[gr]	III, 14	[g]
3073	[g]	III, 50	[g]
3098	[g]	III, 117	[g]
3105	[g]	'Αθήναιον, VIII, 403	[gr]
3157	[g]	<i>B. c. h.</i> , II, 489	[g]
3219	[g]	IV, 176	[r]
3232	[g]	IV, 285	[gr]
3234	[g]	IV, 447	[g]
3253	[g]	IV, 516	[g]
3254	[g]	XIII, 412	[gc]
3256	[g]	<i>Mittheil.</i> , I, 237	[g]
3613	[g]	XI, 278	[g]
<i>CIA</i> , II, 473	[cr]	XII, 245	[g]
II, 874	[gr]	XIV, 100	[g]
II, 477b	[gr]	<i>Bullett.</i> , 1873, p. 226	[g]
II, 1359	[gc]	<i>P.Sch.Ath.</i> , I, p. 26, No. 9	[g]
II, 1388b	[c]	<i>Arch. Zeit.</i> , 1875, p. 47	[g]
III, 916	[gc], [c]	CONZE, <i>Lesbos</i> , p. 12	[g]

ΣΑ CLASS—Continued.

REFERENCES.	GIVER, CAUSE, RECEIVER.	REFERENCES.	GIVER, CAUSE, RECEIVER.
Δελτίον, 1888, p. 183	[cr]	VIII.	[gc]
		X.	[r]

ΣΑ CLASS.

<i>CIG</i> , 259	[g]	<i>CIG</i> , 3240	[g]
2097	[c]	3249	[g]
2197	[g]	3251	[g]
2206	[g]	3299	[g]
2219	[g]	3614	[g], [r]
2271	[g]	2384b	[gre]
2375	[gc]	4152c	[g]
2873	[c]	<i>CIA</i> , II, 329	[ger], [gr]
3034	[g]	II, 1197	[g]
3065	[r]	III, 835	[rg]
3079	[g]	III, 852	[r], [g]
3086	[g]	III, 921	[gc]
3101	[g]	III, 95a	[r]
3103	[g]	LE BAS, II, 1706	[g]
3125	[g]	CONZE, <i>Imbros</i> , p. 93	[g]
3214	[g], [gr]	<i>Annali</i> , 1842, p. 144	[g]
3217	[g]	<i>B. c. h.</i> , IV, 175	[g]
3220	[g]	VII, 278	[rg], [g]
3224	[g]	VII, 469	[g]
3226	[g]	VII, 470	[g]
3228	[g]	XI, 473	[g]
3229	[g]	<i>Mittheil.</i> , XII, 251	[g]
3231	[g]	XII, 370	[g]
3235	[g]	XIII, 74	[g]
3237	[g]	XIII, 80	[g]

C CLASS.

<i>CIG</i> , 2381	[gre]	<i>CIA</i> , III, 92	[r]
3112	[g]	III, 740	[r]
3221	[g]	III, 1203	[re]
5053	[r]	III, 3926	[r]
5269	[r]	LE BAS, II, 1697	[g]
5279	[r]	III, 235	[c]
5339	[r]	<i>B. c. h.</i> , IV, 68	[gre]
5348	[r]	XI, 483	[r]
6480	[r]		

DISCOVERIES AT ANTHEDON IN 1889.

[PLATES XIV, XV.]

II. REPORT ON EXCAVATIONS AT ANTHEDON.*

In the winter of 1888-9, the Director of the American School at Athens decided to conduct excavations at one or two ancient sites in Boiotia, and invited me to take charge of the work. As early in the spring as the weather permitted, work was begun among the ruins of Anthedon.

Anthedon is first mentioned by Homer (*Iliad*, II. 508), who speaks of it as the furthest town in Boiotia. The pseudo-Dikaiarchos (*Bios Ἑλλάδος*, 17) tells us that it was situated on the shore of the Euripos, 70 stadia from Chalkis and 160 from Thebes. Pausanias (IX. 22.6) adds that it lay on the left side of the Euripos (as he came from the eastward) at the foot of Mt. Messapion. This is all the information that the ancient writers give us about the location of the town, but it is enough to identify, as the ancient site, the remains on the shore of the Euripos, about a mile and a half to the north of the little village of Loukisi, and this identification has never been questioned. The remains consist of a city-wall "of the most regular kind of masonry,"¹ an acropolis hill with remains of fortification-walls, the foundations of two breakwaters enclosing a small harbor, and "part of the platform of a great public building, thirty-four yards long, founded in the sea."

About the city itself our information is scanty. The pseudo-Dikaiarchos (*l. c.*) tells us that it was a town of no great size, and that it had an agora surrounded by a double stoa and planted with trees. Strabo

* For the plans which accompany this article, I am indebted to Mr. Robert Weir Schultz, of the British School at Athens. Mr. Schultz visited Anthedon with me after the excavations were completed, and was on the ground less than a day and a half. For this reason his plan, though rendering accurately the appearance of the foundations as a whole, does not attempt to give the exact dimensions and levels of the remains. The walls are rougher at the edges in some places than might be inferred from the plan.

¹ LEAKE, *Travels in Northern Greece*, vol. II, p. 272.

(*Geog.*, 404) and Athenaios (I. 56, VII. 47, 99, XV. 24) give us no additional information of importance. Pausanias (*l. c.*), however, tells us that "somewhere about the middle of the city" there was a shrine of the Kabeiroi, and, close by, a temple of Demeter and Kore, containing their statues in white marble. On the land-side of the city, according to the same authority, lay a temple of Dionysos, containing a statue of the god. There were also at Anthedon the tombs of the sons of Iphimedeia and Aloeus, slain by Apollo, and near the sea the so-called Leap of Glaukos. The last, as Mr. Buck has suggested, "was probably a natural cliff like the numerous Lover's Leaps on our eastern coast." If so, it can only be the steep cliff on the seaward side of the acropolis. Ovid refers twice to Anthedon (*Met.*, VII. 232-3, XIII. 903 ff.) in connection with Glaukos, and Stephanos of Byzantion (*Ἑθνικῶν*, s. v. *Ἀνθηδών*) quotes Lykophron (*Alex.*, 754) for the statement that it was founded by Thracians. Finally, we know from inscriptions (Larfeld, *Syll. Inscr. Boeot.*, 15, 181, 274) that in the last years of the fourth century B. C. and toward the end of the third, Anthedon was a member of the Boiotian League, a fact which was further testified to by one of the inscriptions unearthed by us. As to the name of the town, it seems natural to connect *Ἀνθηδών* with *ἄνθος*. Stephanos of Byzantion (*l. c.*) tells us that the place got its name *διὰ τὸ πασῶν ἀνθηποτάτην εἶναι*, a view which a visitor to Anthedon in late February or early March would certainly be inclined to favor.

Our work at Anthedon began March 5, and continued for three weeks, during which time only one day was lost through bad weather. The number of men employed varied from fourteen to thirty-five, the average being about twenty-five. Mr. Carl D. Buck remained with me during the greater part of the three weeks, and by his suggestions aided me much. Through the kindness of Mr. Ree, director of the English company which is draining Lake Copais, we were allowed, without charge, to use one of the company's buildings half-an-hour's walk from the acropolis of Anthedon. With the aid of the sketch-plan given by Col. Leake (*l. c.*), we were able to trace the course of the city-walls over their whole extent. We found rather more remains of the walls than Leake had indicated, and at one point traces of a tower. Leake's plan seems inaccurate in some respects. The depth of the town from north to south is greater than would be inferred from it, and a comparison of the accompanying sketch of the harbor

with his plan will show that he did not accurately give the relative positions of the breakwater and the "public building" (*Fig. 16*).

We were disappointed to find that nearly the whole area of the city was planted with grain, for, as the only point at which a building could confidently be looked for was at the platform by the sea, we had counted on doing a great deal of experimental digging; but, while we should not have hesitated to dig through grain fields if we had had undoubted indications of important remains, it seemed hardly justifiable to do so on an uncertainty. Work was begun at the platform already mentioned. There were visible, besides the platform, an outer foundation-wall of poros blocks, with a few blocks of an upper course of a rough conglomerate. The wall was well built and the blocks were regular. Four trenches were dug inward from the sea at different parts of the platform. All these, at a depth of 0.56 m.,

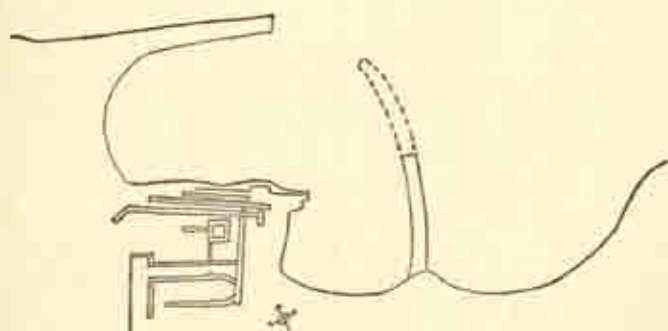


FIG. 16.—*Harbor and Foundations at Anthedon.*

ran into a second foundation-wall composed of large regular blocks of poros. The average size of the blocks is as follows: length, 1.20 m.; breadth, 0.80 m.; thickness, 0.47 m. The wall, which is evidently of Greek workmanship, runs nearly east and west, parallel to the outer wall and to the sea. Eight days were spent in the work at this place, and the foundations of a very extensive structure, or combination of structures, were laid bare (*PLATE XIV*). During this work there were found: near the junction of the walls *e* and *e'*, the top of an inscribed stele of poros, and, close to the most southern wall *n*, an inscribed basis of blue limestone; near the stele, a small Doric capital of poros, 0.36 m. in diameter, with twenty channels and with a dowel-hole in the top; in the part of the structure furthest from the sea, considerable remains of a Roman mosaic pavement with a rather complicated and pretty

pattern in several colors; besides various small objects of no special interest or value.

As the space included in these foundations was so great, and the excavations so barren of epigraphic results or of sculpture, it was deemed best to do only so much work as was necessary to show the ground-plan clearly, without attempting wholly to explore the interior.

The work at Anthedon was, as has been said, merely experimental, and confined to a comparatively small area. Our next trial was made on the acropolis, a hill near the sea and the eastern wall of the city. It descends abruptly into the sea in rocky cliffs, and on its brow are considerable remains of fortification-walls of regular masonry. The top of the hill consists mainly of bare or scantily covered rock, but on the side toward the sea there is a level terrace with a considerable depth of soil. Across this terrace a trench was dug from east to west, and two others were made at right angles to the first; but nothing was found except two walls roughly built of small, irregular stones.

The third trial was made on a hill just outside the city-walls to the southeast, between them and the dry bed of a stream. Excepting the acropolis, this is the most considerable elevation in the immediate neighborhood of the site, and it commands an extensive view, including the acropolis and the greater part of the area of the city. Surreptitious digging for tombs, which has been carried on to a great extent at Anthedon, had previously been done there, and the ground was littered with fragments of pottery. A small portion of a fairly good wall, running about east and west, projected above the surface of the ground on the southern side of the hill. It seemed a promising place at which to look for the temple of Dionysos. Three trenches were dug into the northern side of the hill, and the wall mentioned above was followed. As this proved to form part of a foundation, work was abandoned in two of the three trenches, and the men were transferred to the walls, which in the course of the day were completely laid bare. The foundation seemed to be that of a very small temple, with some irregularities of structure, built of well-cut blocks of the local poros. Though trenches were dug in all directions about the walls, nothing was found except a small Doric unchanneled capital (0.36 m. in diameter) and a long unchanneled drum, both of poros.

Meanwhile, in the trench which had been continued, we found, at a depth of only 0.28 m., a collection of over twenty-five bronze implements and small ornaments, together with a great quantity of sheet

bronze and bronze slag. Four men were kept at work the rest of the day at this point, but found nothing more except some small rough vessels of unpainted clay, and, at a considerable distance, some Byzantine graves. The bronze implements were taken to the National Museum at Athens.

We decided next to make an attempt to find the temple of the Kabeiroi, which Pausanias (*l. c.*) says was in the middle of the city. A very long trench was dug from the southern slope of the acropolis toward the southern city-wall, with two shorter ones at right angles to it. These trenches ran for their whole length through a grain field, the owners of which received compensation. In the upper part of the long ditch, bed-rock was very soon reached; in the lower part, the depth was about a metre. A great many tombs were found, but no walls of any other kind. In the upper part of the trench, on the south-

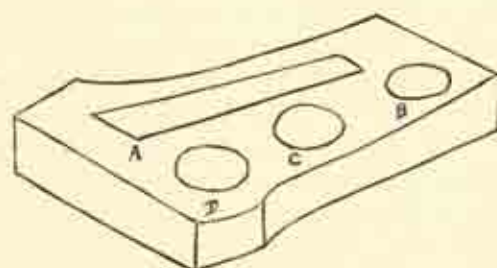


FIG. 17.—Object in poros found at Anthedon, perhaps a στήριγμα.

ward slope of the acropolis, we found an object in poros which is reproduced in *Figure 17*. It is 0.58 m. long, 0.38 m. wide at one end and 0.265 m. at the other. The four cavities, A, B, C, D, have the following dimensions:

A, 0.39 m. by 0.095 m.; depth, 0.07 m.; capacity, 1.5 litre.	
B, 0.135 m. in diameter; " 0.074 m.; " 0.725 "	
C, 0.13 m. " " " 0.065 m.; " 0.5 "	
D, 0.125 m. " " " 0.06 m.; " 0.425 "	

In many ways it resembles the *σηκώματα* which have been found in different parts of Greece and Italy. It differs, from any of those I know, in its small size, in having the rectangular cavity A, and in the small size of the three circular cavities. It bears no inscription. It is finished smooth except on the bottom, which is left rough. It

is now in the church-yard at Loukisi, where were deposited the less important objects found at Anthedon. Further down in the same trench was what appeared to be a very small tomb, made of two pieces of stone hollowed out into a double coffer. It is 1.40 m. long by 0.80 m. wide, and 0.19 m. deep. It somewhat resembles a coffered ceiling-piece, except that it is made of two pieces of stone.

The fourth and last trial was made at a low hill some distance east of the city, beside the road to Chalkis. Here there had been found a sacred boundary-stone of rough conglomerate, not *in situ*, but in a Byzantine grave; and there were visible above ground two architectural fragments, a small Doric frieze-block of poros, with triglyphs, and a small poros cornice-block with denticular ornamentation. There were also, projecting from the surface, some good walls, which, however, proved to be tomb-walls. At this point a great many trenches were dug in all directions, but no trace of a temple-foundation was found. A number of architectural fragments were brought to light, some of which showed traces of blue and red. Of these, a Corinthian capital, rather prettily ornamented but evidently of late workmanship, was taken to the museum at Thebes. In one of the trenches, at a depth of 0.81 m., were found two dedications to Artemis Eileithyia, and what may perhaps be a fragment of a third dedication to Artemis. A great many Byzantine graves were found, one of which was covered by a large inscribed stele of marble, now in the museum at Thebes. At a depth of 2.60 m., was found a grave which was cut in a circular shape in the virgin soil. In this grave were glass beads, bits of bronze, and fragments of terracotta figurines, besides a number of small objects of gilded terracotta with bronze eyelet-holes, which had evidently formed a necklace. They consisted of pear-shaped and crescent-shaped pendants, beads, and small button-like disks, two of which bore well-executed heads.

III. ARCHITECTURAL DISCOVERIES AT ANTHEDON.

THE FOUNDATIONS BY THE SEA.

Between the outer wall and the water's edge lies an extensive platform of poros blocks. This platform, which projects beyond the wall for some distance, is at present 48.50 m. long, and its greatest width is 7.10 m. It appears to have originally run some distance further to

the westward. It is cut by grooves 0.11 m. wide and 0.08 m. deep, which are represented in the plan (PLATE XIV). These grooves may have been used in fastening on an upper course of stones, or, more probably, they may have served merely to let the water run off when the waves dashed over the platform, as must have occurred if the platform was originally of its present height.² The wall *c* shows no trace of further extension toward the east, but apparently ran some distance further toward the west. The length of the existing portion of the wall is 26.25 m. It is built of regular, well-squared blocks of poros. The wall *d* is 0.40 m. higher, and runs parallel to *c*. Its eastern portion is very regular. Toward the west, although it is firmly built and averages over a metre in breadth, the edges are very irregular. There is no trace of a continuation of this wall further to the west. Its total length is 50 m. The wall *e* is parallel to *c* and *d* until it reaches a point just beyond the end of *d*, when it bends sharply. It greatly resembles *d* in every respect; like *d* it is regular and even at the eastern end, but it soon grows irregular at the edges and is more irregular than *d*. Its total length is 47 m. These two walls are crossed at right angles by a third, *e*, which corresponds in all respects to *d* and *c*. Where it intersects *d* and *c* it is regular and even, but it soon becomes ragged at the edges, and is the most irregular of the three walls. This irregularity may perhaps be explained by the nature of the material, which is soft and friable, but, at and near the junction of *d*, *c*, and *e*, the walls, though of the same material, are as regular and even as if built of marble. From *e* is built a slightly sloping, regular foundation of blocks a little over a metre in width. It appears to be the foundation of a sloping entrance into the structure. It is flanked by two blocks of limestone about 0.80 m. square, on which are marks of columns about 0.50 m. in diameter. Directly across the end of this entrance run the remains of a wall *f*, which was probably a supporting wall, not rising much above its present level. The length of this wall, as it now exists, is 11 m.

All the walls so far described are very much alike, and seem to have belonged, with the platform, to a single structure. What this structure was it is difficult to say. It certainly was not a temple. Now the only building not a temple which our literary authorities speak of,

² Mr. Schultz believes that the platform was originally much higher, reaching the level of the foundations.

unless the enigmatic Leap of Glaukos was a building, is the double stoa around the agora mentioned by the pseudo-Dikaiarchos; and the long parallel walls *d* and *e* might very well belong to such a structure. The agora in a town of fishermen and mariners would naturally be situated near the port, around which the town evidently clustered. All that Leake says (*l. c.*) about the supposed temple might apply equally well to the agora. The entrance, if it be an entrance, descends to the port, as would be expected.³

Of the other walls, the next in order, *m*, is probably Greek. From the fact that it does not run parallel to *d* and *e*, and because it is of poorer and rougher construction, it probably belonged to a different structure. The dressed stones of the plan are of blue limestone and stand on the outer (southern) edge of the wall *m*: when uncovered they appeared in shape like the top of a stele, formed of a large central stone and two smaller ones at the sides. Between the central and the eastern stone was a bit of a Doric column of poros, showing channels.

The small structure between this wall and *e* is of extraordinary irregularity. The blocks composing the walls are good, and the foundation is firm and broad, but the edges are very irregular, hardly any two blocks being of the same width. A small and narrow wall of very poor construction connects it with *m*. Through the western wall is carried a v-shaped water-trough, formed of grooved lengths of stone. This comes abruptly to an end after running a short distance.

The walls *n* seem to form the foundation of a Roman building. The curved portion of this wall, which rests upon *ε*, contains mortar. At the western end are considerable remains of a Roman mosaic pavement. The greater part of this was covered with a thin layer of plaster, which revealed the individual stones composing the mosaic but hid the pattern. To the west is a rectangular flooring, with remains of a similar mosaic pavement. This flooring seems to have been surrounded by a foundation-wall, of which there are but scanty remains. At the northern end of this rectangle are some exceedingly irregular walls. All these walls are built of blocks of poros, and we found no traces of mortar anywhere except at the curved part of the wall *n*. It is quite possible that these foundations extend still further toward the

³ Mr. Schultz is of the opinion that the end of the walls *d* and *e* has not been reached, though, as has been said, there is no trace of their further extension. It may be mentioned as a curiosity that there is a tradition, among the villagers of Loukisi, of a palace of Alexander in that neighborhood.

south and west, but there is no trace of a continuation of any of the walls represented in the *PLAN*, and the general results were not such as to lead me to excavate at this point more than was necessary to make a complete piece of work.

THE SMALL TEMPLE AT ANTHEDON.

I have ventured to call this building a temple, from its general form and because its position seems to correspond with that of the temple of Dionysos, as Pausanias describes it. It is very small, its extreme length being only 10.47 m., and its breadth, 6.05 m.; but, according to the pseudo-Dikaiarchos, Anthedon was in his time only a small fishing-village. The walls are certainly Greek, and of a good period.⁴ The walls of the pronaos are the best and most regular, those at the back are rougher. The walls within (*B* and the wall at right angles to it) I cannot understand (*PLATE XIV*). There appears to be no reason for considering them earlier or later than the other walls. It will be noticed that the building faces almost exactly east. It lies on a slight slope, the eastern end being somewhat higher than the western. To the west there is a stream, dry while I was at Anthedon, whose banks at this point are strengthened by regular masonry. The building lies very near the road from Anthedon to Thebes, as is indicated by the line of opened graves. Absolutely nothing was found by which the building could be identified. The bronze implements were found less than a hundred feet away.

IV. BRONZE IMPLEMENTS FOUND AT ANTHEDON.

These implements comprise the following objects (*PLATE XV*):

I.—Double-edged axe-head, with a hole for inserting a handle. Length, 0.225 m.; width at edges, 0.08 m.; width at middle, 0.04 m.; greatest thickness, 0.025 m. The edges of the sides are beveled toward the hole in the centre, which is 0.038 by 0.017 m. It shows no signs of use.

II.—Another axe-head of the same general shape, but smaller, and broader in proportion to its length. It shows evident marks of use.

⁴ Mr. Schultz agrees with me in this opinion.

⁵ I am indebted to Mr. W. J. Stillman for the excellent photograph from which *PLATE XV* is made. The photograph was taken after I left Athens, and, as all of the objects could not be represented, some of those to which I wished to call special attention happen to be omitted.

in the nicked edges. Length, 0.135 m.; width at edges, 0.066 m.; width at middle, 0.038 m.; greatest thickness, 0.024 m.; hole in the middle, 0.035 by 0.02 m.

III, IV.—Fragments of similar tools. Length of first, 0.076 m.; width at edges, 0.062 m.; width at break, 0.037 m.; greatest thickness, 0.024 m. Length of second, 0.08 m.; width at edges, 0.052 m.; width at break, 0.04 m.; greatest thickness, 0.027 m. The break in each is through the hole in the middle, but the two fragments evidently do not belong to the same axe-head.

Axe-heads very like all these have been found in the excavations on the acropolis at Athens, at a depth of 14 m.

V.—Implement consisting of a tube, apparently for inserting a wooden handle, and a short blade beveled to a sharp edge from the under side. Total length, 0.145 m.; length of tube, 0.055 m.; diameter of tube, 0.056 m. Similar objects were found with the axe-heads in the excavations on the acropolis at Athens, but their use has not been satisfactorily explained. A bit of sheet bronze is fastened to the under side of our specimen, which led to the suggestion that a bronze plate had been soldered on, forming a shovel. This view is hardly tenable, and it seems clear, especially from the sharp beveled edge, that the instrument is complete as it is. It may have been used for grubbing roots, or as a kind of gouge. Our specimen is slightly heavier, and rather more carefully made, than the one from the Athenian acropolis.

VI.—End of the blade of a similar instrument (not represented in the PLATE). Length, 0.05 m.

VII.—Piece of bronze resembling a hollow horn. It appears to have been part of some ornament, rather than of an implement of any kind. A bit of sheet bronze is attached to this near the end.

VIII.—Fragment of a narrow, slightly curved band, with raised edges, ornamented with the figure of a stag in repoussé. There are traces of the hind legs of a similar animal going in the opposite direction. The stag's head is thrown back almost upon its haunches, while the horns project in front.

IX.—Drill resembling those now used in working stone. Length 0.13 m.; width at large end, 0.025 m.; at small end, 0.011 m.

X.—Smaller tool somewhat like an awl, with four flat sides, and with a tang for inserting into a wooden handle. Total length, 0.095 m.;

without handle, 0.057 m.; width, 0.07 m. It is barely possible that these two implements may have been used in cutting stone.*

XI.—Chisel, with a flaring edge, consisting, in one piece, of two parts, the chisel proper, and the part to be inserted in a wooden handle. These are separated by a projection on each side. Total length, 0.21 m.; length of chisel proper, 0.12 m.; of handle, 0.075 m.; width of edge, 0.042 m. It shows no signs of use.

XII.—Sickle, ornamented with lines, the edge beveled on one side. Length of arc, 0.31 m.; greatest width of blade, 0.035 m. It is broken across the middle. It has a tang to be inserted in a wooden handle, pierced with a hole for receiving a rivet. It appears to have been used, for the edge is nicked and the point blunted.

XIII–XXVI.—Blades and fragments of blades, mostly of knives of various shapes and sizes, the longest of which measures 0.19 m. Nearly all of these show signs of long use, some being nearly worn through by constant whetting and wear; one is bent nearly double; many of them still bear the rivets by which they were fastened to the handles. One blade (not represented in the PLATE) appears to be serrated, but it may be that it is only nicked, although the nicks are remarkably regular.

XXVII.—Fragment resembling a bundle of reeds or rods. Length, 0.068 m.; circumference, 0.073 m.; width of each reed, 0.010 m.

XXVIII.—Handle of a large vase or caldron with a fragment of the side (not represented in the PLATE).

XXIX–XXXI.—Three smaller handles.

XXXII.—Fragment, apparently of a lance-head, consisting of a thick central shaft, with a thinner blade. Length, 0.05 m.; greatest width, 0.04 m. This is not represented in the PLATE.

XXXIII.—Oval piece of bronze, with indistinguishable ornament in relief.

XXXIV.—Ring of bronze wire (perhaps a bracelet), 0.056 m. in diameter.

XXXV.—Two fragments of a flat-sided bronze rod.

Besides these were found a great quantity of sheet bronze, and large masses of bronze slag, some fragments apparently of the vessel to which the large handle belonged (XXVIII), and a number of small objects.

As has been said, these implements were not deposited in a tomb.

* Mr. Stillman says, decidedly, that they could not have been used for that purpose.

The character of the collection—including implements of various kinds, some new and some bearing marks of long use, fragments of ornaments, together with the presence of masses of bronze slag (thirty or forty pounds, at least)—suggests that we may have come upon the shop or stand of a maker of bronze tools, and that the old implements and fragments were collected to be worked over, while the apparently unused ones may or may not be products of his skill. This theory would account for what seems to be the case, that we have, in the collection, objects of different epochs. It seems more than doubtful that the axe-heads and the object described under No. V can belong to the same time as the ornament with the stag in relief.

JOHN C. ROLFE.

*American School of Classical Studies
at Athens.*

DISCOVERIES AT PLATAIA IN 1889.

III. INSCRIPTIONS FROM PLATAIA.

The following inscriptions were found at Plataia in April 1889. Those to which *R* or *T* is prefixed are edited on the basis of Mr. Rolfe's or Mr. Tarbell's copies alone.

I.—Marble stele with akroterion and two rosettes, found in the foundation-walls of the ruined church "Ἅγιος Νικόλαος, outside the city-walls, to the east. Height, including acroterium, 0.88 m.; breadth, 0.53 m.; thickness, 0.17 m.; height of letters, 0.03 m.

ΑΙΓΥΡΟΝ

Αίγυρον

The name occurs, with the regular Boiotian spelling, at Tanagra, and there also, as it happens, in the accusative (Αίγυρον: COLLITZ, 1053). For examples of the simple accusative on gravestones, see this Journal for 1889, p. 458, at the top.

Just below the ΑΙΓΥΡΟΝ a second inscription is carelessly cut by another hand, and probably at a considerably later date. The letters are about 0.02 m. in height.

ΕΠΙ
ΟΡΩΑΕΔΕΙ

Repeated examination of the stone and of a squeeze has convinced us that this reading is certain in every letter. That there were other letters at the beginning or end of the last line is not impossible, but no distinct traces of any can be seen. This line should give a proper name, but is wholly unintelligible to us.

II.—R. Slab of coarse marble, found in same church. Height, 0.64 m.; breadth, 0.51 m.; thickness, 0.25 m.; height of letters, 0.05 m.

ΕΠΙ
ΣΩΤΑ

Ἐπὶ
Σωτᾷ

III.—Marble block, found in the most western of the ruined churches within the walls of Plataia. Height, 0.335 m.; length, 0.94 m.; thickness, 0.525 m.; height of letters, 0.0475 m. The block had been hol-

lowed out into a trough on the reverse side. On one of the narrow sides is a builder's mark, Ξ.

ΗΠΟΛΙΣ ΗΡΩΙΣΣΑΝ
ΜΟΣΧΕΙΝΑΝΑΡΙΣΤΙΩΝΟΣ
Ἡ πόλις ἡρώσσαν|Μοσχέϊναν Ἀριστίωνος

"The city (erected this statue of the) heroine (*i. e.*, demi-deified lady) Moscheina, (daughter) of Aristion."

IV.—R. Part of marble block, hollowed out into a trough on the inscribed side; found in same church. Height, 0.53 m.; length, 0.77 m.; thickness, 0.7 m.; height of letters, 0.03 m.

ΑΝΔΡ	ἀνδρ-
ΕΛ	ἐλ-
ΤΥΜΕ	τύμ(β)[ο-
ΚC	κο-

Fragment of sepulchral distichs.

V.—T. Block of white marble, found in central apse of same church. The upper right-hand corner and the lower end are gone. The front is ornamented with a simple panel. The inscription is at the top. Height, 1.16 m.; breadth, 0.4 m.; thickness, 0.16 m.

ΥΕ ΤΟΝΙΟ	Ὑς τὸν [τῶν
ΚΑΝΚΕΛΛΩΝ ΚΟΛ	κανκέλλων κό[σ-
ΜΟΝ	μον

"For the adornment of the screen."

The first two letters are twice as high as the rest. The spelling *ύς* for *εἰς* would point to a date not earlier than the ninth century A. D.¹

VI.—R. Marble slab, found in pavement of same church.

Ε	Ἐ[πὶ
ΚΑΛΛΙ	Καλλι-

VII.—T. Fragment of white marble, found in a heap of stones near this church; complete at top, surface chipped away to the extent of three or four letters at left, broken off at right and below; letters very indistinct. Height, 0.26 m.; breadth at top, 0.26 m.; thickness, 0.06 m.

¹BLASS, *Aussprache d. griech.* (3), p. 42, Note 108^a.

OKIMIOΣ
 ΣΟΜΙΚΟΥΣ
 uncut] ΔΟΛΙΧ
 ΠΑΡΘΕΝΟ
 ΛΗΑΤΤΕΡΙ
 uncut] Τ
 /////ΟΥ
 //////////
 uncut]//
 ΛΥΣΙ

Apparently a list of victors in gymnastic contests. The word in the sixth line, therefore, was probably *πάλην, παγκράτιον, or πένταθλον*.

VIII.—T. Fragment of white marble, found near same church; complete at left only. Height, 0.14 m.; breadth, 0.145 m.; thickness, 0.06 m.

ΠΙΕΩ 'Ε]πὶ Σω-
 ΕΠΙΕΒΙ' 'Επὶ 'Ε.

IX.—Marble block, found face uppermost in the apse of the ruined church "Ἅγιος Δημήτριος, just outside the city-wall on the east, near the upper (southern) end; broken off at the left. Height, 0.58 m.; length, 1.45 m.; thickness, 0.19 m.

ΑΓΥΝΑΙΚΩΝ	-α γυναικῶν
ΛΑΜΑΙΕΠΟΙΟΕ	πα]λάμαις πόσιος
ΤΕΡΑΣΑΞΙΟΝΩΜΕΓΑΛΙΡΙΣ	γ]έρας ἄξιον, ᾧ μέγα [χ]αίρις
ΧΟΝΕΥΡΑΜΕΝΗ	-χον εὐραμένη
ΩΩΑΝΘΕΝΙΛΑΣΚΟΝΤΟ	-ς ὡς ἂν θε[ὸ]ν ἰλάσκοντο
ΤΕΔΑΜΝΑΜΕΝΗΝ	τε δαμναμένην
ΝΤΑΝΤΕΙΝΟΔΕΙΤΑΙΣ	-ν πάντε[σσιν] ὃ δέιταις
ΕΚΛΕΙΣΕΛΡΑ	ἔκλεισε [θ]ύρας.

These are the ends of sepulchral distichs. Professor F. D. ALLEN has kindly furnished the following, as a suggestion of the general sense of the original:

μῆμα τόδ' εὐτυχτον, Κλεοβούλη, δι]α γυναικῶν,
 εἰργασται κεδνοῦ ταῖς πα]λάμαις πόσιος.
 εἰκόνα δ' ἔστησεν, γ]έρας ἄξιον, ᾧ μέγα [χ]αίρις,
 τιμὴν σῆς ἀρετῆς διπτυ]χον εὐραμένη.

πάντες γάρ σε βροτοὶ ζῶσαν θε[ὸ]ν ἰλάσκοντο,
 νῦν δὲ σέβουσι νόσφ' κηρί] τε δαμναμένην,
 τύμβον ἀγαζόμενοι δῆλο]ν πάντε[σσ]ιν ὀδεῖταις,
 τοῦ γαμέτης στύγναις χερσίν] ἔκλεισε [θ]ύραν.

X.—T. Marble block, found in same position as No. IX; broken off at the right. Height, 0.51 m.; length, 0.51 m.; thickness, 0.13 m.

ΕΝΤ
 ΠΟ
 ΟCΜΕ
 ΘΗ

The beginnings of distichs, similar to the foregoing.

XI.—Marble stele, with anthemion and rosettes; found in same church. Height of letters, 0.35–40 m., and, in fourth line, 0.25–30 m.

Above the rosettes:

ΕΠΙ
 ΑΦΡΟΔΙCΙΑ

Ἐπὶ
 Ἀφροδισία

below the rosettes:

ΔΙΟΝΥCΙΟΥ
 ΑΘΑΝΙΧΑ

Διονυσίου.
 Ἀθανίχα.

"Over Aphrodisia, (daughter) of Dionysios."

The name *Athanicha* was added subsequently.

XII.—T. Marble fragment, found in same church.

ΤΥΧΙΚΟΥC
 CΜΟΝ

F. B. TARRELL,
 J. C. ROLFE.

*American School of Classical Studies
 at Athens.*

DISCOVERIES AT THISBE IN 1889.

I. REPORT ON EXCAVATIONS.

Between March 18 and 21, I made a trip to Kakosia, the work of laying bare the foundations by the sea, at Anthedon, being meanwhile superintended by Mr. Buck. The village of Kakosia lies between two peaks of Mt. Helikon, not far from the sea. On the hills which immediately surround it, and in the village itself, are well-preserved remains of the walls of an ancient town, built of regular blocks of bluish limestone and strengthened by numerous towers. The walls are of Leake's "fourth order," consisting of a double line of well-cut, regular blocks, the interval between them being filled in with loose stones. In the village are clear traces of one of the gates, and just outside it, in a wheat field, traces of the foundations of a large building. There are also the remains of a mole (now serving as a road) across a marshy plain to the southward, evidently to protect the plain from inundation. It seems to be certain that this village stands directly on the site of ancient Thisbe, as was concluded by Leake and others (from Strabo, *Geog.*, 411, and Pausanias, ix. 32, 3). The only building which Pausanias mentions in Thisbe is a temple of Herakles, with a standing statue of the god. Judging from the great number of churches (twenty-three in all, I was told), Thisbe must have been an important place in Byzantine times. Since the modern village stands directly on the ancient site, extensive excavations must involve considerable expense. I found, however, a great number of Byzantine churches in ruins, and I judged that a few days of work in and around these might yield good results. I returned to Anthedon, finished the excavations by the harbor and cleared off the walls, and on March 27 began work at Thisbe with fifteen men, a number which was afterward increased to twenty. Trenches were first dug in and around the church *Ἰωάννης Λουκάς*, within the limits of Kakosia, but just outside the ancient walls. In front of the church we found a Byzantine pillar of fine white marble, apparently for supporting a screen or curtain. It is ornamented in front with a conventional design in relief, and has a smooth, pear-shaped top, separated from the main shaft by

a narrow neck. The dimensions are as follows: height, 1.77 m.; breadth, 0.20 m.; thickness, 0.135 m. The top is 0.17 m. high and 0.47 m. in circumference. In the pavement of the church we found six inscribed tombstones. An examination of the walls of the church, with as little damage as possible, yielded no inscriptions.

In the pavement of the church *Ἀγία Τριάς*, which was next examined, were found three inscribed tombstones. As the walls of this church were mainly composed of rough masses of stone, and were without architectural or artistic interest, and as they evidently contained inscriptions, I felt justified in tearing down a part of them. Four fragments of inscriptions were found here. The arched entrance was left standing, but was afterward thrown down by the boys of the village. In a third church (*Ἀγία Κυριακή* or *Ἅγιος Ἠλίας*), of which nothing but the foundations remained, four inscribed bases and tombstones were found. Two of the former, though we found them under ground, prove to have been published.

At this point, the Directors of the School, Dr. Waldstein and Professor Tarbell, arrived at Kakosia, and decided to concentrate all our energies at Plataia.

JOHN C. ROLFE.

II. INSCRIPTIONS FROM THISBE.

The following inscriptions were found by Mr. Rolfe at Thisbe (Kakosia) in March, 1889. Those to which *R* is prefixed are edited on the basis of Mr. Rolfe's copies alone; to him also the measurements are chiefly due.

I.—R. Marble slab, used in the pavement of the ruined church *Ἀγία Τριάς*. Height, 0.77 m.; breadth, 0.45 m.; thickness, 0.30 m.; height of letters, 0.03 m. In the upper surface there is a round hole with a diameter of 0.14 m.

ΕΥΘΥΝΙΔΑΣ

Εὐθυνίδας

II.—Marble slab in pavement of same church. Height, 0.765 m.; breadth, 0.525 m.; thickness, 0.28 m.; height of letters, 0.023 m.

Φ Ι Ξ . Λ Α Ο Ξ

Φισ[ό]λαος

The letters have the forms characteristic of the Hellenistic period. They are regularly, though very widely, spaced. A rectangular cut

has removed a single letter, the fourth. *Φσόλαος*, of which the Attic equivalent would be *Ίσόλαος*, is a new name, comparable to *Ίσόδημος*.

III.—R. Stone slab in pavement of same church. Height, 0.78 m.; breadth, 0.49 m.; thickness, 0.19 m.; height of letters, 0.03 m.

ΙΩΠΟΥΡΟΣ

Ζώπουρος

IV.—R. Slab of red stone in the wall of the same church. The height could not be exactly ascertained, as the stone was not taken from the wall; it was apparently about 0.75 m. Breadth, 0.44 m.; thickness, 0.34 m.; height of letters, 0.03 m.

ΜΑΘΕΙΛΟΣ

(Σ)άομειλος

The first letter must have been erroneously copied. The name occurs at Orchomenos and Lebadeia in the form *Σαύμειλος*, and the same contraction is found in other Boiotian proper names beginning with the same element;¹ but, in view of the Boiotian retention of *ao* in compounds of *λαός* and in some other words, *Σάομειλος* seems a possible local form.

V.—R. Fragment of limestone, complete at the left, in the wall of the same church. Height, 0.33 m.; breadth, 0.28 m.; thickness, 0.28 m.; height of letters, 0.05 m.

ΚΛΑΥΛ

Κλαυδ[ίαν ὁ ἀνὴρ (?)

ΚΑΙΗΘΥΙ

καὶ ἡ θυ[γάτηρ.

ΔΙΩΝΕΠΟ

Δίων [ἐ]πο[ίησεν.

"This statue of Claudia (?) was erected by her husband (?) and daughter. The sculptor was Dion."

VI.—Four fragments of limestone (*A, B, C, D*), apparently belonging together, taken from the walls of same church. Fragment *A* is complete at the top and at the left; the others are broken on all sides. Dimensions of *B*; height, 0.30 m.; breadth, 0.33 m.: of *C*; height, 0.19 m.; breadth, 0.18 m.: of *D*; height, 0.23 m.; breadth, 0.49 m. The thickness of each is about 0.175 m.; height of letters, 0.01 m. and (in the last five lines of *D*) 0.016 m. There are numerous ligatures, and the inscribed surface is defaced in spots, so that the decipherment of the text is difficult, and the results in some places uncertain. Fragment *A*, the inscribed face of which was always visible, was published

¹ MEISTER, *Die griechischen Dialekte*, 1, p. 246.

by PITTAKES as No. 3061 in the *Ἐφημερίς Ἀρχαιολογική* and by Von VELSEN in the *Archäologischer Anzeiger*, xiv (1856), p. 288; by both, as we now see, most inaccurately. Unfortunately, we took no squeeze of this fragment, and are not able to give a thoroughly trustworthy text of it. What is given below in majuscules, as *A*, is simply Von Velsen's text, with some corrections and additions introduced from Mr. Tarbell's hastily made copy.

Fragment A.

ΜΟΥΛΠΙΟΣ

ΟΒΟΥΛΟΜΕΝΟCΘΙCΒΑΙΩΝΧΩΡΙΟΝΔΗ
 ----- ΝΕΠΕΜΟΥΓΕΩΡΓΟΥΜΕΝΩΝ
 ΒΙΒΛΙΟΝΓΡΑ --- ΝΑΥΤ --- ΟΠΟΗΤΕΟΝΙC
 -- ΑΙ - ΙΟΝΥΠΕΡΕΚΑCΤΟΥΠΛΕΘΡΟΥ
 -- ΛΗCΗΕ --- CΟΝΤΑΤΟΔΕΔΟΜΕΝΟ
 ΟΝΚ --- ΙΜΕΝΤΙC
 ΕΙΤ --- ΤΗΕΚΚ
 ΩΕΙC

Fragment B.

h /
 ΟΝΚΑΙ
 ΠΕΡΕΚΑ
 ΩΝΠΕΝΤ
 ΑΤΑΛΑΜΒΑΝΟΜ
 ΙΟΙΔΕΜΗΤΡΑΞΑΝΤΕC
 ΑΞΑΝ ΕΙΔΕΤΙCΛΑΒΩΝ --- ΤΟC
 ΤΑΠΩΛΗCΟΥCΙΝΟΙΚΑΤΑΛΑΜΒΑΝ
 ΓΟΝΤΡΑΞΟΥCΙΝΠΑΡΑΥΤΟΥΤΗCΙ
 ΑΖΙΟΝΤΟΥΦΟΡΟΥΤΩΝΠΕΝΤΕΕΤ
 ΤΟΧΩΡΙΟΝΠΟΛΕΙΤΗΚΑΙΤΟΑΡΓΟΝΚΑ
 ΕΦΥΤΕΥΜΕΝΟΥΕΙCΚΟΜΙCΘΗΝΑΙΤΗΠΟ/
 ΕΝΙΑΥΤΟΝΟCΟΝΤΕΛΕCΘΗΚΑΙΟΠΡΟΤΕΡΟ
 ΟΤΟΥΦΟΡΟΥΤΗCΠΕΝΤΑΕΤΙΑCΥΠΕΡ
 ΤΗCΕΚΑCΤΟCΜΗΤΡΑΕΟΝΤΠΛΕΘΡΟC
 ΤΟΙCΠΛΑΕΟΝΤΠΩΛΗCΟΥCΙΝ
 ΚΑΙΘΚΤΟΥΤΟΥCΩΖΕCΘΑΙ
 ΩΜΟΛΟΓΗCΕΝΥΠΕΡΕΚΑCΤΟC
 ΕΝΤΟCΤΟΝΓΕΙΝΟΜΕ
 Ξ Α Τ Ω [uncut]

Fragment C.

ΘΡΟΝΙΟ
 ΑΜΕΝΟΣΚΑΙ
 ΟΥΕΞΟΟΟΥΤ
 ΑΡΑΤΗCΠΟΛΕΟ
 ΙΩΚΑΙΤΑΑΛΛΑΚΑ
 ΟΜΕΝΟΥΤΟΥΦΟΡΟΥ
 ΕΙΤΗΔΑΝΕΙCΤΗΩCΚΑ
 ΟCΙΟΥΧΩΡΙΟΥΗΔ
 ΗΜΟCΙΟΥΚΑΘΗΜ
 ΥΤΟCΓΡΑΦΕΤΑ
 ΝΤ--ΟΙΕΚΑ
 ΠΟCΩΝΗΟΤ
 ΑΤΟCΥ

Fragment D.

ΓΟΤΕΟΝΟΜΑ
 ΕΙΔΕΤΙCΕΞΑΠΑΤΗCΑ----ΟΦΕΙΛΟΝ
 ΟΝΔΗΜΟCΙΩΝΚΑΙΤΟΥΤΟΕΛΕΝΧΘΕΙΗΑΦΑΙΡΕ
 ΗΠΟΛΙCΟΔΕΔΑΝΕΙCΤΗCΟΞΕΝΟCΕΚΤΩΝΑΛΛΑ
 5 ΕΝΤΟCΤΗΝΕΙCΠΡΑΞΙΝΠΟΙΕΙCΘΩΤΟΥΟΦΕΙΛΟΜΕ
 ΑΙCΚΑΤΑΛΙΠΟΙΞΕΝΩCΥΝΓΕΝΕΙΗΦΙΛΩΤΟΥΤΩΝΤΙΤΩΝ
 ΥΤΟΥΗΔΩΡΕΛΕCΤΩΔΕΤΗCΠΟΛΕΩCΤΟΧΩΡΙΟΝ ΕΙΔ
 ΘΗΚΑCΤΕΛΕΥΤΗCΑΙΩΜΗΕΙCΙΝΝΟΜΙΜΟΙΚΛΗΡΟΝΟΜΟΙΤ
 ΟΤΕΡΑΚΛΗΡΟΝΟΜΟCΤΟΥΕΑΥΤΗCΚΤΗΜ/-ΟCΗΠΟΛΙC
 10 ΜΙΝΙΟCΜΟΔΕCΤΟCΑΝΘΥΠΑΤΟC ΘΙCΒ
 ΤΗΒΟΥΛΗΚΑΙΤΩΔΗΜΩΧΑΙΡΕΙΝ ΙΚΑΝΟΝ
 ΚΥΡΙΑΤΑΔΟΞΑΝΤΑΥΜΕΙΝΠΕΡΙΤΗCΠΡΟΤΕ
 ΓΕΓΕΝΗΜΕΝΗCΚΑΙΤΟΤΟΥΑΞΙΟC
 ΠΙΝΤΟΝΕΠΙΧΩΡΙΟΥΚΑΙ

A

Μ(ἄρκος) Οὔλπιος —

Ὁ βουλόμενος Θισβαίων χωρίον δη[μόσιον - - -
 - - - τῶ]ν ἐπ' ἐμοῦ γεωργουμένων - - - - -
 βιβλίον γρα[φ - -]ν αὐτ - - ὁ πο[ι]ητέαν (ἐ)σ[τί]? -
 - - λαι, ιον ὑπὲρ ἐκάστου πλέθρου - - - - -
 πω]λήσῃ - - - - - σουντα τὸ δεδομένο[ν - - - - -
 νκ[- - ε]ἰ μὲν τις
 εἰτ - - - - τῇ ἐκκ[λησίᾳ
 ωεις

B

κα
 -ον καὶ
 ὕ]πὲρ ἐκά[στον πλέθρου
 τ]ῶν πέντ[ε ἐτῶν
 κ]αταλαμβανομ[εν·
 -ι. οἱ δὲ μὴ πράξαντες
 -αξαν. εἰ δὲ τις λαβὼν - - τος
 ταῦ(?)τα πωλήσουσιν οἱ καταλαμβαν[ο
 -τον πράξουσιν παρ' αὐτοῦ τῆς
 ἄξιον τοῦ φόρου τῶν πέντε ἐτ[ῶν
 τὸ χωρίον πολεῖται καὶ τὸ ἄργον κα[ὶ τὸ πεφυτευμένον·
 π]εφυτευμένον εἰσκομισθῆναι τῇ πολ[λει
 ἐνιαυτὸν ὅσον τελεσθῆναι καὶ ὁ πρότερο-
 -ο τοῦ φόρου τῆς πενταετίας ὑπὲρ
 -της ἑκαστος μὴ πλεόν πλέθρο[υ
 τοῖς πλεόν πωλήσουσιν
 καὶ (ἐ)κ τούτου σώζεσθαι
 ὡμολόγησεν ὑπὲρ ἐκάστο[υ πλέθρου
 -εντος τὸν γεινόμε[νον
 -ξατο.

C

πλε[θρον
 -άμενος καὶ
 -ον ἐξ ὅσου τ.
 π]αρά τῆς πόλεω[ς
 -ίῳ καὶ τὰ ἄλλα κα-
 -ομένου τοῦ φόρου
 πολ ?]εῖται δανειστῇ ὡς κα-
 δημ]οσίου χωρίου ἢ δ[ωρεὰ
 δ]ημοσίου καθ' ἡμ[έραν ?
 α]ὐτὸς γραφέτω
 -οι ἐκα[στ
 πῶσον(?) ἢ ὅπ-
 ατοσσ

D

----- τὸ τε ὄνομα -----
 ----- εἰ δὲ τις ἐξαπατήσα[ς τὸν ?] ὀφείλων[τα -----

X.—Marble slab in same position. Height, 0.82 m.; breadth, 0.475 m.; thickness, 0.33 m.; height of letters, 0.03 m.

Α Γ . Λ Λ Ο Δ Ω Ρ Ο Σ

Ἀπ[σ]λλόδωρος

XI.—Marble slab in same position. Height, 0.87 m.; breadth, 0.5 m.; thickness, 0.34 m.; height of letters, 0.04 m.

Ο Ε Ο Φ Α Ν Ι

Θ]εοφάν[α

The name is new, though the corresponding masculine name (Attic Θεοφάνης) is common. The Attic equivalent would be Θεοφάνεια (MEISTER, *Die griech. Dialekte*, I, p. 229), like Ἀριστοφάνεια, etc.

XII.—Marble slab in same position. Height, 0.8 m.; breadth, 0.45 m.; thickness, 0.34 m.; height of letters, 0.03 m.

Α Γ Γ Ι Σ Ι Α Σ

Ἀγ[ε]υσίας

XIII.—Basis of blue limestone, in the ruined church Ἀγία Κυριακή (or Ἅγιος Ἡλίας, as the name was given by some). At the top there is a cornice, on which the inscription is cut. The upper right-hand corner has been broken off, but the breadth can be easily obtained from the back. Height of basis, 1 m.; original breadth at top, 0.455 m.; height of letters, 0.03 m.

Δ Ε Υ Ξ Ι Α Σ Α Σ Κ Λ

Δευξίας Ἀσκλη[απιῶ κή

Ο Υ Γ Ι Η

Οὐγίη

"Deuxias to Asklepios and Hygieia."

Although this stone was found lying on its face under a considerable accumulation of rubbish, it had been seen a few years before, and a squeeze of the inscription had been submitted to M. FOUCART. See the *Bulletin de correspondance hellénique*, VIII (1884), p. 401, No. 2. M. Foucart's reading and note are as follows:

Δ Ε Ξ Ι Α Σ Α Σ Κ Λ Α

Ο Υ Γ Ι Η

La pierre est brisée à droite; à gauche l'inscription paraît complète, les deux premières lettres ne sont pas très-distinctes. Δειξίας Ἀσκλη[απιῶδωρ] Οὐγίη. Dédicace à la déesse Hygieia. Les lettres qui terminent la première ligne se prêteraient à la restitution Ἀσκλη[πίω]. Asklepios est souvent associé à Hygieia, mais dans ce cas les noms des deux divinités seraient rapprochés. Οὐγίη étant isolé à la seconde ligne, je crois plutôt que Ἀσκλη est le commencement du nom du père de celui qui

a *faute de considération*. On this MEISTER remarks (COLLITZ, *Sammlung*, 747^a): Δειξίας, mir unverständlich; etwa [M]ειξίας oder Δειξίας?

Our reading of the first name may be taken as certain, although we found the third and fourth letters not easy to make out, owing partly to the presence in their places of accidental marks which bear a delusive resemblance to the letters ΩΔ. Δευξίας is the regular Boiotian equivalent of Ζευξίας.

As for the restitution of the first line, five letters following Λ (at the edge of which the break at present begins) would leave as much uncut space at the end of the line as at the beginning, while seven letters would extend to the edge. M. Foucart's restoration gives eight letters. A shorter name might be substituted, as Ἀσκληπίχω or Ἀσκληπώνος. But, considering the extreme rarity of dedications to Hygieia alone² and the frequency with which, in joint dedications, the names of the two divinities stand in different lines,³ we have preferred without hesitation the restoration given above.

XIV.—R. Stone slab in same church. Height, 0.9 m.; breadth, 0.49 m.; thickness, 0.21 m.; height of letters, 0.04 m.

ΑΦΡΟΔΙΣΙΑ
ΧΑΙΡΕ

Ἀφροδισία,
χαίρει

XV.—R. Rough stone basis with rectangular hole in the top; found in same church. Height, 0.99 m.; breadth, 0.44 m.; thickness, 0.24 m.; height of letters, 0.025 m.

ΩΝΟΞ
ΑΡΤΑΜΙ
ΟΣΑΓΡΟ
ΕΡΑΣ

The stone is badly defaced, and only so much could be made out. It is perhaps a dedication to Artemis. Two dedications to that goddess, published by M. FOUCART in the *Bulletin* (VIII, 1884, pp. 401-2, Nos. 3, 4), are in this same church.

F. B. TARBELL,
J. C. ROLFE.

*American School of Classical Studies
at Athens.*

² We can cite only *CIA*, III, 185, and BAUNACK, *Studien*, I, 1, *Inscriptionen aus Epidauros*, No. 40.

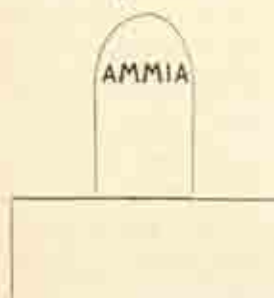
³ See, for example, *CIG*, III, 2390, 2396, 2428, 2429 b; *CIA*, II, 1504; III, 132 b, c, d, e, f, 1, 181 a, 183.

NOTES.

AN INSCRIBED TOMBSTONE FROM BOIOTIA.

The tombstone which is described below was shown me by a peasant of the village of Charadrás, on the road from Thebes to Thisbe. He had found it near the village, and removed it to his house; the inscription, he said, had not been copied.

The stone, which is of marble, is of a peculiar shape, consisting in one piece of a base 0.23 m. high, and 0.28 wide, surmounted by a circular stele, with a rounded top, 0.34 m. high, and 0.495 in circumference, as here represented.



The inscription, in letters 0.02 m. high, is cut on the stele as follows:

AMMIA

Ἀμμία

The name occurs frequently in Attic inscriptions (*CLA*, III, 712a, 2891, 2986a, 2897, 2898), and in a list of names found at Hermione (*CTG*, 1211).

Rounded steles are very common. Of these Ross (*Arch. Aufsätze*, I, p. 26) says: *Vielleicht Andeutung des Phallos? Die böotischen Grabsteine, in Form viereckige Altäre, sind häufig mit einem Phallos gekrönt, z. b. in Thisbe und Lebadeia.* I saw nothing of the kind at Thisbe, and I have been able to find no representations or descriptions of tombstones like this one. Professor Merriam has called my attention to a vase-painting represented in Schreiber's *Bilderatlas* (PL. XCIV, 6), but, as he remarks, the round-topped base, on which a stele shaped like ours stands, is evidently a mound on which the stele was placed.

*American School of Classical
Studies.*

JOHN C. ROLFE.

THE INSCRIPTIONS ON THE OBELISK CRABS IN CENTRAL PARK,
NEW YORK.

It seems proper to put on record in this Journal that the Board of Commissioners of Public Parks of New York City on the 15th of April 1890 altered the Greek and Latin Inscriptions upon the reproduced bronze crabs beneath the obelisk in Central Park, to make them conform to the readings of the original crab now in the Metropolitan Museum of Art (see *The Greek and Latin Inscriptions on the Obelisk-Crab*, A. C. Merriam, Harper and Brothers, 1883). The form in which these were inscribed at the erection of the obelisk in Central Park was this, s. E. corner, right claw :—

Outside

L H ΚΑΙΣΑΡΟΣ
ΒΑΡΒΑΡΟΣΑΝΕΘΗΚΕ
ΑΡΧΙΤΕΚΤΟΝΟΥΝΤΟΣ
ΠΟΝΤΙΟΥ

Inside

ANNO VIII
AVGVSTICAESARIS
BARBARVSPRAEF
AEGYPTIPOSVIT
ARCHITECTANTEPONTIO

They now read :—

L IH ΚΑΙΣΑΡΟΣ
ΒΑΡΒΑΡΟΣΑΝΕΘΗΚΕ
ΑΡΧΙΤΕΚΤΟΝΟΥΝΤΟΣ
ΠΟΝΤΙΟΥ

ANNOXVIIIICAESARIS
BARBARVSPRAEF
AEGYPTIPOSVIT
ARCHITECTANTEPONTIO

The crab at the S. E. corner, outside, had this inscription :—

"Removed to Alexandria Egypt and erected there B. C. 22 by the Romans." In this the date has been changed to "B. C. 12."

The work has been done quite satisfactorily, considering the limitations of space and the desire to alter as little as possible and yet secure correctness of fact in the result. No attempt is made in the inscriptions to reproduce the original with epigraphic exactness.

A. C. MERRIAM.

CORRESPONDENCE.

LETTER FROM EGYPT.

GIZEH MUSEUM.—The removal of the national Egyptian Museum from its confined limits at Bâllâq on the east or city-side of the Nile to the unoccupied and spacious Khedivial palace at Gizeh on the western bank was begun in the early summer of 1889. The task was completed in January of the present year, and the Gizeh Museum was then opened to the public. It is about three and a half miles from the central quarter of Cairo, isolated in a vast acreage of partially wooded fields, and immediately surrounded by artificial gardens, which were admirably laid out, but have been much neglected. The transfer of the collection, which includes many heavy stones, was effected with comparative ease by laying a portable railway to and from a service of flat-boats on the river.

The general classification followed by Professor Maspero is retained. Statues, inscribed or painted stones, and many smaller objects are grouped as belonging to the Old Empire, to the Middle, or to the New. Tombs, coffins, painted mummy-cases, and the royal mummies, constitute a separate department, as do ornaments in gold and silver, plate, jewels, and objects of high artistic value; and the collection of objects found at Dêr-el-Bahari in 1881 is kept apart. A public sales-room provides for the disposal of casts, of duplicates, and—to suit all tastes—of “modern antiques,” when properly asked for. The Museum, however, possesses much that nobody may see. A department for monuments of Greek or of Roman origin was indeed instituted at Bâllâq, though it is not yet open to the public; but there are large collections of coins and astraka, of Egyptian papyri and Koptic manuscripts, and of Kufic objects, which have never been exhibited, and which are quite unavailable to students or other persons who might wish to use them.

No catalogue is in prospect; nor is labelling of any kind; and the excellent “Guide” for visitors prepared by Professor Maspero cannot now be used. It is expected that some change in the management of the Museum will soon be made.

SOCIETY FOR PRESERVING THE ANCIENT MONUMENTS OF EGYPT.—This Society has offered its funds to increase an appropriation sought from the Egyptian Government, upon the condition, however, that certain archæologists shall be appointed members of a special local committee. The present Commission for Antiquities leaves what it holds to be archæological

questions entirely to the Director of the Museum. The new *per capita* tax upon visitors to the monuments of Upper Egypt, which, between November 1888 and June 1889 yielded nearly \$5500, has been nearly all expended, according to the Director's report, for the preservation of monuments. The Director is of opinion that with this fund to draw upon fewer than ten years will be required to complete the works now contemplated. He reports the following improvements (*Contribution des Touristes en 1888-1889*).

LUQSOR.—The temple of Amon has been freed from the corroding action of the soil which still partly covered it: 18,000 cub. met. were removed. Open joints have been closed with cement, and the columns and bases in the chief court have been repaired with the help of temporary shoring. In a new inscription found here Amenophis III of the XVIII dynasty, the supposed founder of the temple, states that he reconstructed it entire. A table of offerings bearing the name of Usertesen of the XII dynasty had been found here in 1888, and now two architraves of Sebekhotep of the XIII dynasty have appeared—in further confirmation of that statement. Silver plates bearing the bishop's name Bichamon have also been found here.

MEDINET HABÛ.—The first temple-court and its surroundings have been thoroughly cleared of rubbish, which was undermining the walls. A jar of demotic ostraka was found here, also a statue of Amenophis III, and the base of some other statue.

QURNAH.—A broken column in the Ramesseum has been repaired; and protecting doors have been placed before the tomb of Rechmara, and before another of the XVIII dynasty lately discovered.

DËR-EL-BAHARI.—The clearing of a terrace revealed a number of apparently very ancient implements, and a number of Koptic inscriptions.

BIBAN-EL-MOLUK.—The tombs of Rameses VI and of Rameses IX have been cleared away and protected with doors. A valuable collection was made here of stone fragments left in the tombs and bearing rapidly executed fanciful designs not related to the tomb sculptures.

DËR-EL-MEDINET.—The temple has been protected by restoring the old enclosure wall; and at Abydos the smaller temple has been enclosed, and the work of excavation begun about the larger temple.

FAYÛM.—Mr. Petrie has finished his excavations in the Fayûm, and has transmitted sixty-two cases to the Gizeh Museum for inspection. The chief result of this season's work has been, he says, the collection of duplicates of objects previously reported.

OLD CAIRO.—An extensive Kufic cemetery has been persistently plundered for many months by a few Arab peasants. The tombs lie just below the surface, which was lately an unbroken stretch of sand. They are rudely opened from the top or at one side in the hope of finding inscribed

stones; and they are at once partially or wholly concealed again by the workmen, who knowing the sacrilege which they do to their own Faith, make off when anyone approaches. No "unbeliever" may meddle with such sites, and it is seldom that one can get a glimpse of the tomb-structure. The walls, which are rectangular, seem to be about 35 centim. thick, surmounted by a low arch—the whole strongly built up of small unburnt bricks made apparently of Nile-mud mixed with bits of limestone. The inside is whitewashed, and a shallow niche is left at one end, in which perhaps the inscribed tablet was placed.¹ The bodies of the dead were wrapped in very coarse cloth or matting, and a few fragments of wood are to be seen scattered about. The tablets are commonly 4 to 6 cent. thick: the other dimensions vary greatly, the maximum hardly exceeding 60 cent. White marble—occasionally mottled or black—is of more frequent occurrence than coarser limestones. The letters are sometimes incised, and sometimes brought into relief by shallow incisions between them. The style of letters varies greatly, being more or less ornamental. A few stones are bordered with excellent designs. The inscription consists of the usual formula of invocation followed by the name and date, which varies from 240 to 270 of the Hegira.

The management of the Gizeh Museum have taken no action in the matter—except to buy the tablets, of which several hundred have been collected.

The rubbish heaps of Old Cairo have lately been examined by Count d'Hulst, in behalf of the British Museum, for what can be learned from them about old Arab pottery; but the results are not yet reported. A contract has also just been signed giving to the Egypt Exploration Fund for three years the right to excavate the site of Herakleopolis (modern Ahnas-el-Medineh), the capital of the IX and X dynasty kings near the entrance to the Fayûm—and also its necropolis, the modern Sedment, in the border of the desert. The Committee of the Fund was at the last moment induced by various considerations not to excavate during the present season.

FARLEY B. GODDARD.

Cairo, Egypt,
March 25, 1890.

¹ A statement by one of the fellahin, that the tablets are found lying in a horizontal position above and outside of the tombs does not accord with the facts that the tombs are commonly broken into, and that no objects of value are found except the tablets.

REVIEWS AND NOTICES OF BOOKS.

ARCHÆOLOGICAL INSTITUTE OF AMERICA. *Tenth Annual Report: 1888-89. With Appendices on the recent progress of archaeology* by ALFRED EMERSON, HENRY W. HAYNES, and AD. F. BANDELIER. 8vo, pp. 108. Cambridge, 1889; John Wilson and Son.

While the Institute had considerably increased its membership during 1888-89 and the separate societies into which it is divided had shown unusual activity, there was not very much material for a report, owing to delay in the publications of Messrs. Clarke and Bandelier and the fact that the Institute is at present reserving its funds for some future excavations. The salient feature of the report is the first paper in the appendix on *Recent Progress in Classical Archaeology*, by Alfred Emerson, Professor of Greek in Lake Forest University. It covers the last ten years, beginning with Olympia and closing with the Athenian akropolis. It is only when all the facts are thus grouped by a skilled and familiar hand that their collective importance can be grasped. Pergamon, Myrina, Assos, the exploration of Asia Minor, Cyprus and Crete, and the unexpected Greek finds in Egypt, are all taken up in turn. The share in carrying on and illustrating all this work taken by the German, French, Italian, English, and American Schools and Academies and archaeological reviews, is set forth. The picture is an interesting one. The climax is reached on Greek soil in the excavations of Epidauros, Eleusis, Mykenai, Delos and Athens. A more concise account of corresponding work in American archaeology is given by Professor Henry W. Haynes. It is largely devoted to an enumeration of the works that have been published during the past few years: the work of Messrs. Bandelier, Putnam, Powell and his associates in the Bureau of Ethnology, especially Professor Cyrus Thomas. Mr. A. F. Bandelier then contributes a short account of archaeological work in Arizona and New Mexico during 1888-89.—A. L. F., JR.

WILLIAM H. GOODYEAR. *A History of Art for classes, art-students, and tourists in Europe.* Second Edition, 1889. A. S. Barnes & Co., New York and Chicago.

This brief history is intended to be an elementary guide to the subject. If brevity were always the soul of wit, it should be rated very high. Of its 352 pages more than half are occupied by illustrations; in the remaining hundred and fifty odd pages of text a cursory glance is taken at the

architecture, sculpture, and painting, of all countries from Egypt to modern times. The sketch is tolerably accurate and well suited to students in schools, academies, and perhaps colleges. The division of the text into numerous sections with headings makes it easy of consultation. Many of the illustrations are fairly good, although the brilliant red and brown tints in which they are often printed are repulsive. Where so little space was at his disposal, the writer should have confined himself to a clear and systematic exposition of his subject. He seems to fail in ability to analyze styles and state condensely, to cast away the superfluous and hold on to the essential. We have historical and social *excursions* and disquisitions on side issues. There is not a sufficient enumeration of special works to illustrate general remarks, or specification of differences of styles, or explanation of historic development. The use of the word "Byzantine" to include all Early-Christian art is an inaccurate and misleading innovation, made all the more confusing, because, forgetful of his innovation, he uses the term at times, in the usual acceptance, to designate the art of the Byzantine Empire.—A. L. F., JR.

LECOY DE LA MARCHE. *Les Sceaux*. 8vo, pp. 320. Paris, 1889; Quantin.

This volume is a very creditable addition to the *Bibliothèque de l'enseignement des Beaux-Arts*. From his connection with the historical section of the *Archives nationales de France*, M. de la Marche has had abundant opportunity to acquaint himself with the richest collection of historical seals, and he has improved his opportunity so as to present to us in this little volume a thoroughly comprehensive and interesting account of the history of seals from the earliest Egyptian and Babylonian engraved stones to the decadence of the art in modern times. Several of the chapters of the volume are descriptive and historical in character, and, with the aid of process reproductions, bring to our notice a series of seals of sovereigns, then of knights, then of civil officials, and finally of ecclesiastics. Other chapters are designed to inform us in regard to the character of the art and treat of the various kinds of matrices and impressions, of the inscriptions on seals, and of the laws which have regulated their use. By no means the least valuable is the chapter on collections of seals, which indicates the ease with which collections may be formed of fac-similes and photographic reproductions. By this means sigillography ceases to be of interest merely to the antiquarian and amateur, and becomes an important and fruitful branch of archaeology.—A. M.

ORIENTAL ARCHÆOLOGY.

J. DE MORGAN. *Mission Scientifique au Caucase. Études archéologiques et historiques. Tome Premier. Les premiers âges des métaux dans l'Arménie Russe*: pp. 231, pl. VII, fig. 215. *Tome Deuxième. Recherches sur les origines des peuples du Caucase*: pp. 305, pl. XVI, fig. 46. 8vo, Paris, 1889; Leroux.

The French Ministry of Public Instruction sent M. J. de Morgan on an expedition to the Caucasus with the object of making archaeological investigations and of securing by excavation collections for the French museums. Three years spent in constant work in this region have resulted in the formation of important collections and in the present report in which are formulated the results of the author's work and studies. They turn largely upon prehistoric archaeology and the origin of metals.

In this field—the Caucasus, and especially Armenia—French archaeologists have been the active rivals of the Russians. MM. Chantre and Germain Bapst were M. de Morgan's predecessors, but his work appears to have been more comprehensive. His report is divided into two parts. The first volume gives a careful account of the author's excavations in the early necropoli and a consequent study on the arts and industries, arms, dress, ornaments, instruments and implements, agriculture and ceramics of the people they represent. This people, he concludes, was of the Turanian race, settled in this region from the earliest ages, who made of it, in the progress of history, their last stronghold against the increasing power of Shemites and Aryans. Their early necropoli, which cannot be later than 3000 or 2500 B. C., show them to have been at that time familiar with the use of iron and bronze; the former being obtained from local mines, the latter being of foreign importation from further east. Assyria, Babylonia, Egypt had no mines from which to draw these metals except the copper mines of the Sinaitic peninsula, and the next nearest source was the mountains of Armenia: the conclusion is, that the earliest historic empires—Egypt and Babylonia—were probably indebted for their knowledge and use of metals to the Turanians of the Caucasus. The author's attempt to formulate the pre-history of this region leads him to the following results. (1) There is no proof of the paleolithic state in Transcaucasia: (2) The neolithic (or polished stone) and bronze states, if they existed at all in Little Caucasus, were of short duration: (3) The *Swastika*, rather abundant in the Caucasus, appears to have been introduced by a migration previous to that of the metals: (4) The peoples of the Caucasus certainly received from the East the knowledge of bronze, but probably invented iron: (5) The necropoli of Redkine-lager and Djalaloghle belong to the first period of the use of iron, whose discovery in the Caucasus is certainly anterior to 2000 B. C.: (6) This iron stage was of

long duration and, though probably of Turanian origin, felt the Aryan and then the Shemitic influence, and ended when the Aryans invaded the country: (7) Assyrian influence was felt in Russian Armenia from the ix to the viii cent. B. C.: (8) The most recent tombs of the necropoli of the Lelwar region date between the viii and v cent. B. C.: (8) In the latest tombs of Russian Armenia, native art gradually disappears and is replaced by Iranian forms, probably introduced into the Caucasus by the Ossethians: (9) Inhumation was practised in the iron state, and was followed by incineration.

If, as seems probable, the Caucasians employed bronze and iron before these or other metals were known to the early Babylonians and Egyptians, the date of the earliest Caucasian civilization represented by the tombs of the first group is certainly not exaggerated by M. de Morgan. On the contrary, if he had possessed a more detailed acquaintance with Egyptian and Babylonian antiquities and literature, and such works as the sceptre of Pepi I (vi dynasty) and the figures of Tello, he would have been able to assert that the inhabitants of the lower Euphrates and Nile valleys already employed metals between 3500 and 4000 B. C. In 1883, Professor Reyer published in the *Archiv für Anthropologie* (vol. xiv) a good summary of what was known of the use of bronze in antiquity.

The author divides Caucasian industry into four periods: the *first*, represented by the necropoli of Redkine-lager and Djalall-oghle, begins in 2500-3000 B. C.; the *third* shows Assyrian influence, and dates between ix and vii cent.; the *second* comes at an indeterminate date between them; the *fourth* presents special characteristics which show that it represents the Iranian invaders of the vii cent. B. C., called the Irons or Ossethians, lasting up to the v cent. B. C. A large part of the volume is devoted to historic and ethnographic considerations which are very instructive for the elucidation of the very obscure problems involved in the study of this almost unknown region. It is to be hoped that before long a sufficient number of correlated facts will be grouped to bring this region into organic connection with the great civilizations of the East.

An attempt at such a treatment from the historic point is made in the second volume of this work,² in which the development of the peoples that inhabited this region is traced from the earliest prehistoric periods to

² The following are the titles of its chapters: ch. I. *Origins*; II. *Chaldeo-Egyptian period*; III. *The Argonauts*; IV. *Assyrian period*; V. *Kingdom of Ourartou*; VI. *Invasions of the VII century*; VII. *Persian period*; VIII. *Alexander the Great and the Seleucidae*; IX. *Ethnography of the Inhabitants of the Caucasus in the 1st cent. A. D.*; X. *From the first century to the great invasions of the Barbarians in the West*; XI. *Invasions of Barbarians in the West. Conquests of the Arabs*; XII. *Georgian independence*; XIII. *Turkish invasions—Seljukides and Mongols*; XIV. *Modern times; Turkish and Persian domination; Russian conquest*; XV. *Conclusions*.

the present day. It is based on two sources—literature and discoveries—both of which are insufficient in quantity. For the early period the author makes an interesting study of the emigration of metals, illustrated by maps and by comparative tables of the mines of copper and tin on the globe and of the names of the various metals in different languages, from which he draws interesting deductions. Hebrew and Greek traditions regarding the knowledge and use of metals refer mostly to the Caucasus. The author adopts the Turanian theory of Hittite ethnography and consequently relates the Hittites to the Caucasus and gives in its place a sketch of the history of this newly discovered people whose contests typify, according to him, the contest between the Turanians and the other great branches of the human race. The Assyrian annals are laid under heavy contribution for a sketch of the various "Turanian" states situated to the north and west of Assyria. During the ix century, there arose on the ruins of the Turanian confederacy, the powerful kingdom of Ourartou, which included the greater part of Armenia and perhaps of Little Caucasus. Its kings, according to Assyrian annals, were the most formidable northern adversaries of Assyria for nearly two centuries, and they embodied the last effort made by the Turanians to play a preponderant part in Western Asia. At this time they were attacked also by the hordes of the North, who expelled the Turanians from Armenia and Asia Minor. Before this, the Toubal and Moushkou were independent Turanian peoples, as were also the inhabitants of Khoummouk and Nairi. There had been a slow Aryan immigration into Caucasus, Armenia, and Kurdistan, when Cimmerian and Scythian invaders came down from the North. From this time forward there are more data on which to base historic and ethnographic judgments concerning the vicissitudes of this region under the Persians, Greeks, Byzantines, and Mohammedans, and, as these phases are better known, they require no special comment.

The picture given in these volumes is one not to be found elsewhere. Its novelty excuses a certain amount of repetition and defective arrangement.—A. L. FROTHINGHAM, JR.

CLASSICAL ARCHÆOLOGY.

JOHN M. CROW. *The Athenian Pnyx*. With a Survey and Notes by JOSEPH THACHER CLARKE. Reprinted from the *Papers of the American School of Classical Studies at Athens*, vol. iv, pp. 207-80.

This pamphlet embodies the results of a careful study of the whole Pnyx question, made during the author's residence in Athens at the American School. It is a clear and concise summary of the subject, comprising an examination of the passages in ancient authors where the Pnyx is mentioned; a minute description of the site known as the Pnyx, illustrated by several cuts and a map; and a detailed review of the objections to what

may be called the Chandler hypothesis. The whole is a piece of intelligent work which is most creditable to American scholarship.

More than one hundred years ago, the English traveller Richard Chandler identified as the long-neglected Pnyx a semicircular excavation on the northeast slope of a hill between the Museum Hill and the Hill of the Nymphs. These ruins—if that word can be used of remains so scanty—had previously been known under several different names. Stuart and Revett had described them under the name of the Odeum of Regilla. Since Chandler's time, the site has been visited by all travellers in Greece who have any interest in antiquity, and has been described by not a few. Until the middle of the century, there was little or no question as to the identity of the remains.² In 1852, Welcker, following out hints dropped by Ulrichs, published a thesis³ to prove that the site had really been a place sacred to Zeus, that the so-called Tribune of Demosthenes had been in fact an altar. Göttling⁴ had previously maintained that the ruins were those of a Pelasgic fort which had been afterwards altered as a place for the public assembly. The literature which these novel views called forth is neither meagre (as can be seen from Professor Crow's bibliography) nor unimpassioned.

When Ernst Curtius took hold of the subject in 1862, he felt justified in calling it *die brennendste Frage der inneren Topographie von Athen*. In order to come to some certain conclusion, he made excavations on the site, and the results of his work were published in No. 1 of his *Attische Studien*. It is apparent from the tone of this essay that he felt he had extinguished a great part of the conflagration: he believed that this site could not have been the Pnyx, although where the Pnyx really had been he could not discover. It is not easy to agree with Bursian⁵ and Hicks⁶ that even on Curtius' presentation of the facts we can still believe in the Chandler theory. Some scholars have preferred to have no opinion on the subject; others⁷ have accepted Curtius' conclusion, that the site was a sacred one, an *ἀγὼν θεῶν*. The result of Professor Crow's work is to show that on several points Curtius was mistaken in his observations, if they were really his.⁸

² BÖTTIGER and SCHÜMANN had expressed suspicion early in the century; CHRISTENSEN, *Athens Pnyx*: Copenhagen, 1875.

³ *Der Felsaltar des höchsten Zeus oder das Pelasgikon zu Athen, bisher genannt die Pnyx*: Berlin, 1852.

⁴ *Das Pelasgikon in Athen*: Halle, 1851. *Das Pelasgikon und die Pnyx in Athen*: Jena, 1853.

⁵ *Lit. Centralblatt*, July 23, 1863.

⁶ *Ency. Britt.*, s. v. *Athens*.

⁷ E. g. GUHL and KONER, *Life of the Greeks and Romans*.

⁸ CHRISTENSEN, l. c., says that Curtius had excavations made under the direction of a German architect.

(1) The area of the enclosure is more than twice that assigned by Curtius. Indeed when the data given in the *Attische Studien* are used, it is easy to see that in some inexplicable fashion a mistake was made in calculating the area.

(2) The surface of the rocky hillside is not everywhere *sauber bearbeitet*, as Curtius concluded from its condition where his excavations were made. In general it is too rough and uneven to have served as a floor, even if we can suppose that a sloping floor could be used. It is much more probable that, as Chandler thought, the whole enclosure was filled up even with the upper edge where the bema or tribune stands.

(3) In two places indicated on his chart Curtius reports the smooth rock surface at the base of the rear wall to be 4.3 and 3.5 meters respectively below the level of the foot of the bema. Professor Crow says that at these points the rock surface is *on a level* with the foot of the bema. This mistake was so obvious on first entering the enclosure, that it led Professor Crow to make a new examination of the whole site.

(4) About two-thirds of the distance from the bema to the Cyclopean wall forming the arc of the semicircle Curtius discovered, at a point six meters below the present surface, a structure of which he writes as follows: *Es war also keine Treppe, sondern offenbar ein gleichartiger Bau, wie das Bema oben in der Mitte der Rückwand, mit dem er in einer Linie liegt und so dass die Stufen parallel laufen. Es ist also durchaus wahrscheinlich, dass auch hier wie oben über den Stufen ein vier-eckiger Felswürfel sich erhob. Die Ansätze desselben sind sichtbar, aber er ist bis auf die Grundfläche abgearbeitet, was zu dem Zwecke geschehen ist, ein späteres Gebäude darüber aufzuführen* (op. cit., p. 79). Elsewhere (p. 97) he mentions *das mittelalterliche gemäuer* found here, and concludes that it was the remains of a Byzantine chapel. Bursian bravely asserted that this structure must have been a second bema, used, perhaps, when the wind blew so strongly that a speaker on the upper and larger tribune could not be heard. Or possibly it would explain the story preserved by Plutarch, that the Thirty Tyrants had turned the bema so that it faced away from the sea; this lower structure might then be looked upon as the older tribune. But Professor Crow found here nothing but *three steps cut into the hillside*, apparently of the same date as other cuttings in the rocky hills of this locality. Both Professor Crow and Mr. Clark consider that these steps are of much older date than the construction of the Pnyx: not a hint is given of any remains of a building over them.

(5) According to Mr. Clarke's survey, even the outline of the Pnyx given in the chart accompanying the *Attische Studien* is incorrect. Welcker's chart published in 1852 gives a more accurate idea of the real shape of the enclosure.

Professor Crow's studies, then, result in putting the question about where it was before Curtius began his work on it. The latter has succeeded in calling attention more fully to the connection of the Pnyx with the prehistoric remains in its vicinity. In other respects he has only confused the problem which he thought to solve. Professor Crow does not claim to have pronounced the last word. Yet, after reading his discussion of the objections to the Chandler theory, one is tempted to frame a stronger statement than his conclusion, that, *While we cannot say with absolute certainty that the so-called Pnyx is the real Pnyx, the evidence taken collectively is strongly in favor of this conclusion.*—G. M. WHICHER.

K. DUMON. *Le Théâtre de Polyclète.—Reconstruction d'après un module.* Folio, pp. 51, 3 plates. Paris, 1889.

In this short essay the author puts forth a new method of reconstructing the ancient theatre. He claims to have found a modulus (of about 11 feet) whose multiples and fractions were used in building Polykleitos' theatre at Epidauros, and, presumably, the other ancient theatres. The ground-plan given on one of the plates seems to have been carried out with great care and conscientiousness. The only objection is that the method is too artificial, especially when it is found that it operates with four different systems of measurement. The author considers himself at decided variance with Vitruvius, though his independence is perhaps in some instances only fancied. And this, for one who is convinced of the high value of Vitruvius' sources, where he treats of the Greek theatre, is not to be lamented. The radial construction of the theatre does not seem sufficiently valued in the essay under consideration. The elder Polykleitos (not the younger) is regarded as the builder of the theatre at Epidauros, and a better notion in regard to its "harmony" is arrived at.—G. OEMICHEN, in *Woch. f. klass. Philol.*, 1890, No. 12.

IMHOOF-BLUMER und O. KELLER. *Tier- und Pflanzenbilder auf Münzen und Gemmen der klassischen Altertums.* 4to, pp. 168, 26 phototype plates. Leipzig, 1889.

This work of the two authors is a worthy successor of Imhoof's *Portraits on coins of the Roman Republic and Empire* (1879), and of his *Portraits of Hellenic and Hellenized peoples* (1885), as well as of Keller's *Tiere des klassischen Altertums*. 13 plates are given to the coins, and as many more to gems. They are then arranged in their natural order of subject: mammals, birds, reptiles, fishes, insects, and plants. For the purely archæological reader some plates of fabulous and compound animals are subjoined. The phototypes from various public and private collections are chosen usually because they are successful and interesting representations and

afford a good general survey of the field. The whole of the material is not presented, but rather such a selection as bears repeated testimony to the skill and taste of the editors. The common assertion, that the ancients lacked the ability to observe nature closely is repeatedly contradicted by these coins and gems. The general impression of each animal is truly given just as it would appear to one who had been used to seeing it from his youth but had not paid especial attention to its separate members. The identification of many of the forms is, hence, often uncertain, as the slight differences of species are omitted or indistinctly shown. A valuable part of the work is the lists of types that occur but are not shown in the book itself.—A. PREIFFER, in *Woch. f. klass. Philol.*, 1889, No. 46.

R. GRUNDMANN. *Über 98 in Attika gefundene Henkelinschriften auf griechischen Thongefässen.* Leipzig, 1889; Teubner.

The author publishes here for the first time a collection of inscriptions on vase-handles at present in the Japanese Palace at Dresden. Of these, 82 belong to vases of Knidian manufacture, 14 come from Rhodos, and a few from Paros and Thasos. In the first part is given an illustrated list of the inscriptions, together with a careful restoration and commentary of them by the aid of cognate material. In the next section advantage is taken of previous work by Stephani, Becker and Dumont. Rhodos, Knidos, Thasos, and Olbia are the main centres of the manufacture and export. In regard to the names stamped on the vases, the writer believes the first to be that of a state official, the second that of the *κεραμεύς* or potter: the first identification is made probable by the analogy of coins. It is at times difficult to make a distinction between official and private marks, the latter names being often found by the side of the former. The names are not always on one handle, but are sometimes divided between them, so that on one appears the main stamp of the officials sometimes with title and provenience, on the other, the subsidiary stamp of the maker or makers.—R. HIRSCH, in *Woch. f. klass. Philol.*, 1890, No. 16.

V. LALOUX. *L'Architecture Grecque.* 8vo, pp. 304. Paris, 1888; Quantin.

It is unfortunate that the *Bibliothèque de l'Enseignement des Beaux-Arts* should not be represented by a stronger book on Greek architecture. One needs merely to glance at page 9 of this little volume and read the author's list of the most important publications on Greek architecture, to obtain a fair sample of the inadequacy, inaccuracy, and lack of discrimination which characterize the remainder of the volume. M. Laloux evidently belongs to that class of Frenchmen whose patriotism permits them to mention a few German and English sources of information, provided he makes little

or no use of them and cites their titles inaccurately. The book is written by a practical architect, and we might well disregard its bibliographic and archaeological deficiencies (though it is rather sad to see the most antiquated information still treated as the most important) if only the author would supply in its place information of practical importance. But even here the book is sadly lacking. The illustrations are numerous, but poor and misleading; the definitions and descriptions show also a confusion of thought, which is most unfortunate, as an elementary treatise should at least state clearly the fundamental notions of the subject.

The instances of inaccuracies in this volume are too numerous to receive serious treatment. But sometimes the author's lack of knowledge seems to be deliberate. Thus, in speaking of Tiryns, he tells us, with perfect confidence, that the walls were built about the XIV century and that the galleries there afford us the most ancient (!) experiment in vaulted (!) construction—such information had been sanctioned by centuries of ignorance. But, though he knows of a French translation of Schliemann's *Tiryns*, the excavations have "no special interest from an architectural point of view." So, he republishes the vacant old plan of the acropolis made before the excavations had been undertaken. Again, since Hittorf and Zanth, *Architecture antique de la Sicile*, is one of the few French works cited in the list, he might have consulted the work to advantage: on p. 79 he refers to "the old temple" and to "the more recent temple" of Selinous, as if acquainted with only two; though on p. 188 he says "there are six temples known at Selinous, of which it is difficult to distinguish the plans in the great mass of ruins which cover the ground." Had he referred to Hittorf, he might have found seven of the temples of Selinous carefully distinguished and described.

Several of the more important volumes of this series have already been translated into English, and we believe the demand for a good handbook on Greek architecture strong enough to have found for this, also, a translator. But the contents of the volume do not merit it.—A. M.

JULES MARTHA. *L'Art Étrusque*. Illustré de 4 planches en couleurs et de 400 gravures dans le texte, d'après les originaux ou d'après les documents les plus authentiques. 8vo, pp. 635. Paris, 1889; Firmin-Didot.

This work was written in view of the subject proposed by the French *Académie des Inscriptions et Belles-Lettres*: "Critical study of the extant works of Etruscan art; origins of this art; its influence on Roman art." It was crowned by the Academy in November, 1887, and was in some points remodelled before publication. The author had already published a handbook on the subject, *Manuel d'Archéologie Étrusque et Romaine*; in which

his treatment of Etruscan archaeology did not lead one to expect so good a book as the present certainly is. The scheme is excellent; the treatment full, clear and systematic; the illustrations numerous; the material well grasped; the literature of the subject mastered. To these virtues is added another, also found more frequently among French than other Continental writers, an interesting and good style. The thoroughly scientific standpoint is shown even in matters that may appear trivial but are very indicative, such as the use of the ancient proper names instead of modern equivalents.

Ch. I, on Etruria and the Etruscans, treats of the countries inhabited by the Etruscans, the Etruscan race, and its migration. Ch. II is devoted to the earliest Etruscan burials, the *tombe a pozzo*, and contains a thesis in favor of their ascription to the Etruscans instead of to an Italic race. In ch. III, entitled "The first Etruscan civilization," the earliest works of ceramics and metallurgy are described. The Etruscans who settled to the north of the Apennines are the subject of ch. IV, and the more advanced art of the Etruscans south of the Apennines follows, in ch. V. Here the first part of the book closes, with the end of a general sketch of the history of Etruscan art from its beginning to the second cent. B. C., when Græco-Roman art began to predominate in Italy. Before proceeding any further, the author's views on Etruscan ethnology, history, and art may be briefly analyzed.

The author finds Etruscans everywhere in Italy, and believes, with Cato, that nearly the whole of Italy belonged to them. He states the various ancient hypotheses regarding the race to which the Etruscans belong: that of Hellanikos—that they were a branch of the Pelasgians, and disembarked at the mouth of the Po; that of Herodotos—that they were Lydians who came from Smyrna to Umbria; that of Dionysios of Halikarnassos—that they were autochthonous. M. Martha concludes that the "Etruscans" were probably Pelasgians, but may be a term to designate a mixed population and without ethnic meaning. He declares himself against an immigration by sea and adopts the general terms of the conclusions of Helbig and Undset—that they came into Italy from the north by land, probably in the eleventh century B. C. As a consequence, the *tombe a pozzo* which represent burial by cremation are said to belong to the early Etruscan civilization, in the same way as the *tombe a camera* with their buried bodies represent a later stage of the same culture. Neither Celts, Gauls, nor Umbrians, nor any other non-Etruscan tribes are allowed to claim any archaeological remains. The early "Etruscans" are a semi-barbarous people, without arts or even industries, without a capacity to develop them without outside help; a people purely imitative and without imagination. M. Martha does not face the dilemma which he makes for

himself in trying to explain why the Etruscans north of the Apennines remained barbarous while their Tuscan brethren advanced to a comparatively high stage of culture, which they must have reached by contact with a more highly civilized pre-existing civilization. What was this civilization higher than the Etruscan? Can it possibly have disappeared without leaving a trace? This is certainly the *crux* of the Etruscophiles, for they are unwilling to grant that tradition is correct as interpreted by the majority of modern writers—that this pre-existent population was a branch of the Pelasgians, whoever these may have been. Analogies to early Greek works in pottery, architecture, painting, early figures, etc., are also difficult to explain on the exclusive Etruscan hypothesis. In fact, the weakest point in the book may be said to be comparative archaeology. It is true that not much has been written on the subject, but its very novelty makes it tempting, and the omission much diminishes the value of the work as a critical study of the origins and history of Etruscan art.

The author gives the following stages or periods in the development of the Etruscans south of the Apennines: (1) *tombe a pozzo*; (2) *tombe a fossa*, end VIII, beg. VII cent.; (3) period of Oriental, especially Phœnician, influence, or of the *tombe a camera*, which begins with the second half of the VII cent., and includes the famous treasures of the *Regolini-Galassi* tomb (Caere), the *Grotto of Iai* (Vulci), of the *Tomba del duce* (Vetulonia), and the finds of Palestrina; (4) predominance of Hellenism, beginning with the V century, with Athenian predominance; although the Chalkidians, Phokaians and Corinthians had imported Greek works long before that date. The latest Greek influence was from Magna Græcia. Thus the career of Etruscan art was mainly determined by commerce.

After the general historical sketch comes the second or descriptive part of the book, in which each of the arts is taken up in turn, and the principal monuments described in order. In architecture—after preliminary remarks on the materials, the cutting of rocks, free construction, the vault, wooden construction, general forms, the columns, and sculptured and painted details—we find chapters on (1) sepulchral, (2) military, and (3) religious architecture. They are very complete summaries of the present knowledge regarding this subject. Sculpture (ch. XII) and Painting (ch. XIII) are treated after the same manner; the general remarks on historic development, technique, and method being followed by a description of the monuments classified under appropriate heads. Greece and Asia are credited with being the inspiring sources of the arts of design among the Etruscans, whose poverty of invention as well as of execution led them, as soon as they were able, to adopt both the technique and the subjects of Greek art. With them art fell to the level of an industry. The treatment of painting is fuller and more systematic than that of sculpture, its monuments being

more numerous and varied in date, and susceptible of classification into schools and epochs: its styles are treated in ch. xv, and it is shown to have had a regular and progressive development contrary to the sporadic, inorganic use of sculpture. It shows a peculiar mixture of the native realism with an idealistic conventionalism borrowed from Greece. Ch. xvi treats of Ceramics; ch. xvii of Metallurgy; ch. xviii of Jewelry; ch. xix of Glyptics and Numismatics. Here a fundamental difficulty is forever coming to the front. What of the tens of thousands of vases, bronzes, gold jewelry, cut stones and other objects, found in Etruscan tombs: are they in reality of Etruscan workmanship? Apparently a small proportion in the fifth and fourth centuries B. C., a larger number in the sixth and seventh. The vases in black ware or *bucchero nero* are treated with especial fullness, as they constitute the typical Etruscan style. Nineteen-tenths of the painted vases found in museums and other collections come from Etruscan tombs: they were imported from Greece, and are here discussed only in order to explain their presence. A Greek origin is also ascribed to the engraved stones and the well-known gold jewelry; in the metal-work (the mirrors, for example), the workmanship is usually Etruscan but the type Greek.

The author occupies a peculiar position in regard to the country south and east of Etruria, such as Latium, Sabina, and the neighboring regions inhabited by the Latins, the Volsci, Hernici, Aequicoli, and other cognate tribes, whose early cities preserve their ruins to an even greater extent than do the Etruscan cities. M. Martha, mainly through similarity of the names of many of these cities to others in Etruscan territory, regards them also as Etruscan cities: such are Fidenae, Crustumina, Tusculum, Velitrae, Ardea, Fregellae, Ferentinum, Cora, Terracina. If these coincidences prove that a population of the same race and language once inhabited Etruria, Latium and the Volscian territory, the weight of tradition and monumental evidence is surely in favor of this being not an Etruscan but a Graeco-Italic population. In harmony with this theory of the author is the claim that the Etruscans occupied the greater part of Southern Italy. But M. Martha has not studied the Pelasgic cities of Latium, Sabina, and its neighborhood. After claiming them for the Etruscans, he makes no use of them. His account of military architecture, of sanctuaries, of polygonal structures, of the use of vaulting and other architectural features, would have been far more complete if he had done so. As a consequence, we find a further and stranger claim—that the Etruscans used polygonal masonry very extensively and everywhere, and that all the constructions of this kind in Italy were built by them. In this ignoring of all other early Italian races and calling all their remains Etruscan, M. Martha, I believe, stands quite alone among writers.

As a classification of monuments into series, as a convenient book for reference, as, in fact, the first book of a general character that has been written on this difficult subject, this work will render great service to both the archaeologist and the learned public, even though it contain certain general opinions of very doubtful exactitude.—A. L. FROTHINGHAM, JR.

IWAN VON MÜLLER. *Handbuch der klassischen Altertums-Wissenschaft. Fünfter Band, 3 Abteilung. Die griechischen Sakral-
alterthümer und das Bühnenwesen der Griechen und Römer.* 8vo, pp. xi, 304. München, 1890.

This portion of the fifth volume of Dr. Iwan von Müller's encyclopædic handbook of classical antiquities contains two treatises; one by Dr. Paul Stengel on Greek Ceremonial Antiquities, the other by Dr. Gustav Oemichen on the Greek and Roman Theatre. Dr. STENGEL's work will be a most helpful guide to students, as it is clear, condensed, and thorough. After a brief introduction, defining the subject, mentioning the chief sources of information and the fundamental characteristics of the Greek religion, the special topics are treated in the following order: (1) *Sacred places, altars, the temenos and the temple*; (2) *The officials, the priests, their assistants, the seers, divination and the oracle*; (3) *Sacred practices, prayer, hymns, the oath, dedicatory offerings, sacrifices, purifications and the mysteries*; (4) *Sacred occasions, national festivals, the Olympian, Pythian, Isthmian and Nemean games, local festivals including the Athenian, Peloponnesian and other festivals.* The literature of each special topic is given under its appropriate section, the foot-notes being reserved as proof-texts.

Dr. OEMICHEN's work on the Theatre of the Greeks and Romans is rather dryer in treatment. After a perfunctory introduction, he treats first of the politico-social conditions of the Attic theatre, the time, place, and regulation of the plays, then of the *personnel*, and of the financial and legal arrangements. After a similar treatment for the Roman theatre, he considers the external means, the building, the paraphernalia, the actors' outfit, and, finally, the representation, the circumstances under which it was given, the various forms of representation, and the corresponding arts.—A. M.

EUGEN PETERSEN und FELIX VON LUSCHAN. *Reisen in Lykien, Milyas und Kibyratiss.* pp. 248, 40 plates. Wien, 1889.

The first volume of explorations in this series of "Travels in South-western Asia Minor" was undertaken in 1881 at the expense of the Austrian Government. The present volume forms the second in the series, and contains the results of an expedition of 1882 (made possible

by the contributions of certain generous patrons) and of an independent journey of Von Luschan in 1883-84. A third volume will treat of Pamphylia.

The heliotype plates are from photographs taken by F. von Luschan, and the volume is accompanied by a very complete index to the two that have already appeared. In beauty of execution these volumes leave nothing to be desired. In the realm of topography many sites have been identified more carefully than before. Especially is this true of the position of the ancient towns Karmylessos, Trysa, Istlada, Aperlai, Podalia, the capital of the district of Antiphellos, *etc.*, and there is added a careful description of the volcanic district of Chimaira. Archaeology is enriched with careful descriptions of a relief from a very ancient sepulchral monument in Trysa, and of the frieze belonging to the heroön on the same site. The theatre at Myra, the granarium of Hadrian, and the Doric monument of Antiphellos are treated, and finally the walls of Balbura, which, though very late, nevertheless appear "Cyclopean" in their type of structure.

The inscriptions in the present volume are especially important. The oracle at Patara is shown to have begun its activity again in the second century A. D. Many of the formulas by which the disturber of a tomb is cursed were found. In one rather unusual formula the entire property is devoted to the treasury. Of the Roman period there is an inscription in honor of M. Agrippa, but by far the most important is one from Rhodiopolis in honor of a certain Opramoas. It comprises twenty columns arranged on the four sides of an heroön. 64 separate testimonials of merit are contained in it, some granted by the emperor, others by procurators, but most of them by the Lykian League (*κοινόν*). We are made acquainted with an officer termed *ἀρχιφύλαξ* who seems to have had charge of raising the imperial tribute and even of paying in a certain amount out of his own purse in case the taxes had not as yet been all brought up to the required sum. Another inscription shows that the lykiarch and chief-priest of the Augusti (*ἀρχιερεῖς τῶν Σεβαστῶν*) were usually separate offices. The Lykian League was composed of a *κοινὴ ἀρχαιριακὴ* and a *κοινὴ βουλὴ*, and the latter seems to have had the right of passing honorary decrees. Separate committees in the League were the *ἀρχοστᾶται* (electors) and the *βουλευταί*, probably fewer in number, and finally the *ἀρχοντες*. Opramoas seems to have brought to the aid of the State 350,000 denarii, besides constructing many buildings and instituting festivals. He was especially benevolent at the time of the earthquake that wrought such havoc throughout Asia Minor in the interval between 141 and 143 A. D.

The anthropologic part of the book is from the pen of Von Luschan. It gives many illustrations of heads, and, beside the material collected, is

an example of well considered method. The chief part of the present population of Lykia consists of Turks. Among them there is, however, a very peculiar race called the Tachtadschy, who live in the higher mountainous tracts and follow the business of wood-cutters. Though officially reckoned to Islam, they have their own strange superstitions and separate priests. Von L. suggests, from craniological considerations, a pre-Greek origin for these people. The other inhabitants fall under two types. One of these evidently goes back to an Hellenic race, the other to some Shemitic people. The existence of this latter race in Lykia and Pamphylia the author believes (with Petersen) can be proved by philologic methods also.—O. TREUBER, in *Woch. f. klass. Philol.*, 1889, Nos. 47-8.

EMIL REISCH. *Griechische Weihgeschenke*. 8vo, pp. vii-153. Wien, 1890; F. Tempsky.

This is the eighth of the series of treatises published by the archæological and epigraphical seminary of the University of Vienna under the direction of Benndorf and Bormann. It is the work of a young and ambitious student, exhibiting the results of no small amount of industry and careful handling of a large mass of material. This material has not been so thoroughly treated before. The work is divided into four sections: (1) The origin, meaning and types of votive offerings; (2) Agonal votive offerings; (3) The prize tripods in musical contests; (4) Votive offerings connected with the drama. The origin of votive offerings is found in the practice of making presents to the dead, though no attempt is made to show how far the customs connected with votive offerings were derived from this source. The assumption upon which votive offerings are made is, that the divinity has feelings and wants similar to those of men. Such offerings are of various kinds; some are valuable in themselves, others for the ideas connected with them; some are symbolic in character, while others have no meaning beyond themselves. The best mode of classification is an objective one, by means of which they fall into three classes: (a) representations of gods, heroes and personifications; (b) representations from human life; (c) objects of human possession.

Agonal votive offerings are then treated under the headings: images of festival-divinities, representations of the victorious athletes, charioteers, musicians, etc., and the offering of the prizes and of the implements of victory. The section devoted to tripods is an enlargement of the author's *Dissertationschrift*, and treats of the character, form, and history of tripods, of their pedestals and decoration, and of the buildings in which they stood. Under votive offerings connected with the drama are treated: images of Dionysos and his train; representations from the drama itself; offerings of the theatrical properties and prizes.—A. M.

Eighth Annual Report of the Managing Committee of the American School of Classical Studies at Athens, 1888-89. With the Reports of CHARLES WALDSTEIN, Director, and FRANK B. TARBELL, Annual Director. 8vo, pp. 53. Cambridge, 1889; Wilson.

The Report shows the presence of eight students during the year 1888-89. The School was opened early in October and closed about April 1, when the students dispersed to travel through various parts of Greece. The director in charge for the entire year was Professor Tarbell; Dr. Waldstein also directed the work during his stay in December, January, and March. Professor Tarbell held three exercises a week on the architecture of Athens, on inscriptions, and in Greek literature; Dr. Waldstein delivered five lectures a week on Greek art during the period of his stay; and Mr. Gardner of the British School lectured on Greek vases. Dr. Waldstein has resigned the Directorship of the Fitzwilliam Museum in Cambridge in order to reside in Athens a part of every year as permanent Director. Short reports are made on the excavations and researches of the School at Ikaria, Stamata, Anthedon, Thisbe, and Plataia carried on respectively by Messrs. Buck, Washington, and Rolfe; full accounts of which have been published in the JOURNAL.

The variety and inspiring quality of the work thrown open to students who attend the School at Athens is vividly shown by this Report. To read the Greek poets and orators under their native skies, to stand on the very spot where Demosthenes spoke and where Sophokles and Aristophanes were acted, to listen to such eminent European teachers as Dr. Dörpfeld and Mr. Gardner expounding the history of Greek art—these must do as much to shape the interests of a student as an entire college course. Semi-public meetings also were held for the presentation of papers, which were attended by a considerable number of archaeologists living in Athens. Five of such meetings were held and papers were read by Dr. Waldstein, Professor Tarbell, Mr. Buck, Dr. Rolfe, Mr. Lodge, Mr. Quinn, and Mr. W. J. Stillman. The students have also submitted theses, several of which will be published.—A. L. F., Jr.,

WALZ. *Abhandlung über die Erklärung der Eckfiguren am Ostgiebel des olympischen Zeustempels und am Westgiebel des Parthenon.* 4to, pp. 39. Tübingen, 1887.

In these pieces of reclining statuary Walz sees, not river-gods (as they have been usually explained since Pausanias' time), but spectators. The two men in the corner of the gable at Olympia are shown to be quite unlike the nature of the two rivers of the locality; and the same with regard to the two corner figures of the western gable of the Parthenon. The

type of the reclining river-god is not older than the third century a. c., and in all probability was created by Eutychides, the scholar of Lysippos, and was first used in his much praised statue of the river Eurotas.—J. BÖHLAU, in *Woch. f. klass. Philol.*, 1890, No. 4.

A. WINKLER. *Die Darstellungen der Unterwelt auf unteritalischen Vasen.* 8vo, pp. 92, one plate. Breslau, 1888.

This is, in reality, a much extended commentary on plates 1-6 of series E of the *Wiener Vorlegeblätter*. In scenes from the nether-world the principal persons represented are such heroes as afterward returned to the light—Orpheus, Herakles, Theseus. Erinnys in company with Herakles he considers to be rather Hekate, and in proof of this cites some unsatisfactory differences in the manner of wearing the hair. A figure he calls Protesilaos is rather, with Winnefeld, to be identified with Triptolemos. In some directions the essay of Winkler is also lacking in completeness.—J. BÖHLAU, in *Woch. f. klass. Philol.*, 1890, No. 9.

CHRISTIAN ARCHÆOLOGY.

GIO. BATT. DE ROSSI. *La Capsella Argentea Africana offerta al Sommo Pontefice Leone XIII, etc.* Folio, pp. 33, pl. 3. Roma, 1889; Cuggiani.

In 1884, the remains of a Christian basilica were unearthed, 8 kilometres from Aïn-Beida, on the new road to Tebessa in Tunisia. The building was a small quadrangular structure with three naves, and its ruins were so complete that it was proposed to rebuild the church. The monogram of Christ, the peacocks, vine, foliage, and other characteristic signs indicate the close of the fifth or the early-sixth century as the date. Among its rude reliefs, that representing a centaur is interesting as being the earliest-known example in Christian art of this figure borrowed from classic art. Fragments of a monumental inscription, partly restored, indicate that the saints especially venerated in this church were Paul, Peter, Laurentius, Hippolytus, and others whose names cannot be determined. The author decides that this Paul and Peter must not be considered to be the apostles, but some unknown saints of the name, because Paul is named first. The connection with Laurentius and Hippolytus, among the greatest of Roman martyrs, and their position at the beginning of the inscription would appear to militate against this somewhat forced conclusion. In the glass portraits of the apostles found in the catacombs, S. Peter is given the place of honor on the right in the majority of cases, but in many cases this is reserved for S. Paul: as well try to prove that whenever Paul has the place of honor the heads are not those of the apostles. Some other reason would seem necessary.

A stone block 38 by 33 cent., excavated within the church, was found to contain, in a cavity, the silver casket here illustrated. It was purchased by Cardinal Lavigerie and presented to Pope Leo XIII on the occasion of his Jubilee. Its extreme rarity and the style and character of the reliefs upon it make it one of the most interesting pieces of early-Christian metal-work. It is oval in shape—of a very long oval—and has a bulging cover. The entire surface is covered with reliefs: two compositions are on the outer rim, one on the cover. The first scene on the rim represents the mystic rock: on it rises the *signum Christi* or monogram; from it flow the four rivers of living water from which drink a deer and a doe, while a palm-tree encloses the composition at either end. On the opposite side, the Lamb stands in the centre, and eight sheep approach, from either side, starting from two aedicula, symbols of the Jews and Gentiles, of Jerusalem and Bethlehem. Both scenes are reductions of the compositions in mosaic or fresco in the apses of the basilicas. The placing of the monogram on the mount in the place of the lamb, the figure of Christ, or the cross, is unique, according to the author. I would call his attention, however, to Garrucci, pl. 352, where the cross with the monogram is placed on the rock. These two compositions, if placed one beneath the other, reproduce a customary apsidal subject. On the cover is a single figure, that of a martyr, according to De Rossi, holding in both hands a crown of laurel; above his head the Divine hand appears holding a crown. He is robed in tunic and pallium, and stands on a rock from which flow the four rivers of paradise; on either side is a candlestick holding a lighted torch. Comm. de Rossi recognizes that there is no example of a mere human figure usurping the place of the Divine Christ upon the sacred mount, and he also refers to the unusual occurrence of the candlesticks on either side of a defunct person. There seem to me, although the learned author does not appear to admit it, some reasons to believe that this may be no martyr, but Christ himself. The hand appearing out of the heavens, the living waters, the candlesticks, are all frequently found with figures of Christ: the type of the features confirms this attribution. Examples of the candlesticks in this connection are seen in Garrucci, plates 337, 392, 425. The main difficulty is the crown which the figure holds, and which is what makes De Rossi consider it that of a martyr. In Garrucci, pl. 455, Christ on the mount lays hands on two crowns; in pl. 345, he has given crowns or wreaths to SS. Peter and Paul. The monogram of Christ is very often surrounded by a crown, and this is sometimes placed on the cross, as a symbol of Christ, on the mount. There is, however, one example of Christ holding the crown in his hand: this is in the apse-mosaic of San Vitale at Ravenna, slightly posterior in date to the silver *capsella*. Here, Christ is about to deliver the crown to S. Vitale. Carrying out De Rossi's admirable idea, that these reliefs on the reliquary

are but the reduction of a large apsidal composition, we may imagine that the principal group, in the upper part, was formed of Christ, standing on the mount and surrounded by a number of figures representing the saints venerated in the church, perhaps the very ones mentioned in the inscription. To the titular saint, as at San Vitale, he is about to present the crown. Below are the two secondary scenes—the lamb and the sheep, and the deer drinking of the waters of life. The artist of the *capsella*, being limited in space, could retain only the central figure of the main composition; and, as there was no martyr present to whom the crown could be given, the outstretched arm of Christ was drawn back, and only the idea of the action remained. If the artist had not intended this for Christ, he would not have placed him on the mount, for the mount was already fully represented on the rim.

The text of this monograph is a very thorough piece of work, careful and scholarly, as are all the writer's productions. He shows, as usual, a surprising range of acquaintance with monuments. The discussion of this single work leads him to marshal forth a long array of general facts and conclusions, in the domain of early-Christian archaeology, connected with the subject. The phototype plates of the *capsella* and details of the church are excellent.—A. L. F., JR.

CHARLES HERBERT MOORE. *Development and character of Gothic Architecture*. 8vo, pp. XIX, 333; 191 illustrations. London and New York, 1890; Macmillan and Co.

Mr. Moore's treatment of Gothic architecture, though in most parts but a summary of current knowledge, differs in form from the usual standard. This is intentional. He deprecates the customary predominance given to æsthetic considerations, to accessories, to forms not logically consequent from true Gothic ideas. He tells us that he is forced to exclude from the sphere of genuine Gothic (p. v) *the greater part of what has usually been called Gothic architecture, because of its failure to exhibit those qualities of design and construction which are distinctive*. In fact, his assertion is, that Gothic architecture (p. vi) *was never practised elsewhere than in France*. The method of this book is thus briefly defined (p. vi). *The French origin of Gothic is, indeed, now pretty generally admitted on the continent of Europe; but the exclusive claim of the architecture of France, in the Middle Ages, to be called Gothic has not thus far, so far as I know, been advanced. This being the case, nothing short of a close analysis and comparison of the different pointed styles of Europe—a work which, strange as it may seem, appears not before to have been undertaken—could be expected to establish a view so different from that which commonly prevails.*

According to Mr. Moore, every country claims to have as good a Gothic and sometimes as early a Gothic style as France, and the French have perhaps made no greater claim than either the English or the Germans to its original authorship (p. vii). For one familiar with the relative literature, this assertion is strange. On this supposition, the contents of the book are arranged in eleven chapters. In ch. i is given a *Definition of Gothic*, preceded by a sketch of the study of the style by previous writers: the philosophy of the style is discussed, and certain principles are established as lying at its bases. As a summary, we will quote the following (p. 30): *In fine, then, Gothic architecture may be shortly defined as a system of construction in which vaulting on an independent system of ribs is sustained by piers and buttresses whose equilibrium is maintained by the opposing action of thrust and counter-thrust. This system is adorned by sculpture whose motives are drawn from organic nature, conventionalized in obedience to architectural conditions, and governed by the appropriate forms established by ancient art, supplemented by color design on opaque ground and more largely in glass. It is a popular church architecture,—the product of secular craftsmen working under the stimulus of national and municipal aspiration and inspired by religious faith.*

The principles being established, and it being shown that the development of vaulting so as to concentrate the thrust on given points constitutes the essence of Gothic, the next step is to study the history of *Gothic Construction in France* (ch. ii). The church of Morienval is given as anticipating some of the innovations carried out in the abbey church of St. Denis (1137-41), where there is a full system of sustaining ribs in the vaults, of which the transverse and longitudinal ones are pointed, and where the rib system for the first time wholly determines the forms and constitutes the strength of the vaults. Then follow, during the third quarter of the twelfth century, parts of the cathedrals of Senlis and Noyon, in which the Norman sexpartite vaulting was adopted; and, later in the century, Notre Dame of Paris, Mantes and Laon. The advances and the differences in all these buildings are carefully and minutely discussed from the point of the construction of the vaults, the consequent grouping of the piers and supporting shafts, the method of counteracting the vault-thrusts, etc. Then follows an examination of the vaulting systems of the more advanced Gothic of the first half of the thirteenth century, in which the continuity of members, from the pavement upward, becomes an unvarying principle: S. Leu d'Esserent, Chartres, Reims, Amiens, St. Denis. The development of the flying buttress is then analyzed; finally, other features, such as windows, choirs, façades, towers, and, in general, the external features.

Chapter iii treats of *Pointed Construction in England*. The usual and well-known buildings are described, and it is shown in what particulars

they approach, in what they differ from, true (= French) Gothic. The author's conclusion is (p. 169), *that the early pointed architecture of the Middle Ages in England is, with few exceptions, totally different in its nature from that of the same period in France; and that in constructive principle it differs little, if at all, from the Norman-Romanesque.* It is even easier to deliver a similar judgment on *Pointed Construction in Germany, Italy, and Spain* (ch. iv), at least with respect to the first two countries. This chapter is put together in even sketchier fashion than the preceding, partly, no doubt, because the author judges mainly, not from personal inspection, but from photographs and drawings. A few of the well-known buildings are spoken of in so far as they are more or less related to Gothic by their vaulting system. They are all condemned as un-Gothic. The only exception is made in the case of some of the Spanish cathedrals which approach more closely to the pure French types than any buildings erected outside of France.

Chapters v to x are subsidiary, and deal with Gothic profiles in France and "pointed" profiles elsewhere; with sculpture, both decorative and figured; and with the other arts of painting and glass then subordinated to architecture and required in order to assure its complete effect.

This analysis has been somewhat long; but it was required to show the scope of the work. Mr. Moore brings to his task several qualifications. He is a clear and easy writer and unites a pleasing style to systematic thought. He is an excellent and ready draughtsman, and his sketches and copies from photographs, freely and artistically yet accurately made, are a welcome commentary to his text. An æsthetic appreciation of the works he describes is united to a quick perception of stylistic characters and distinctions and a clear understanding of the constructive laws applied by Gothic architects with ever increasing ability as they came to realize their full possibilities. The result is an excellent work which cannot fail to give the average reader a clearer perception of the actual facts of the development and character of Gothic construction. Mr. Moore is quite right in thinking that such a book was sorely needed, and that nowhere else is the subject treated in exactly this manner. Perhaps it seems hardly fair that the great work done by French students should be overlooked, as it appears to be. Viollet-le-Duc, the fetish of foreign (I mean non-French) students of French architecture, receives due homage, but another and a greater than he, Quicherat, appears to be unknown. And yet Quicherat was, thirty years and more ago, the founder and until his death the leader of a large school of French artists and archaeologists who appreciate their own architecture in just the way Mr. Moore says that it should be, but is not, appreciated. Viollet-le-Duc's geographical division of French schools was shattered by Quicherat, who substituted his famous classification into

classes, genera, species, and families, according to the system of vaulting employed. Mr. Moore would have derived much assistance, in determining the genesis of the ribbed pointed cross-vault, from a perusal of the treatise on *L'Architecture Romane* in Quicherat's *Mélanges d'Archéologie et d'Histoire*, edited by M. de Lasteyrie. Intricate points in the earliest phases of transitional vaulting have been ably discussed, in view of examples that appear to be unknown to Mr. Moore, by Robert de Lasteyrie and Eugène Lefevre-Pontalis (e. g., *Bib. École des Chartes*, 1885 and 1886) both able pupils of Quicherat.

It is apparent that, from confining his attention almost exclusively to Gothic structures, Mr. Moore has an imperfect acquaintance with Romanesque monuments. He would not otherwise have asserted (p. 16) that Romanesque builders *rarely* vaulted their naves, or have supposed (and marvelled at it) that semi-tunnel vaults over aisles were brought into use to support cross-vaults over the nave (p. 12); whereas, as a matter of fact, they were first used, in Provence, to sustain the thrust of the tunnel-vaults of the nave, thus explaining their *raison-d'être*. This lack of familiarity prevents his noticing the possibility of the Rhenish (instead of the Norman) origin of the ribs, in support of which Quicherat gives quite a list of monuments. The most admirable part of the book is chapter II, on *Gothic Construction in France*, in which the writer deals with monuments thoroughly familiar to him: it is sufficiently detailed to be of permanent value. A suspicion may be felt that the dates are slightly anticipatory: a hasty comparison I have made shows that Mr. Moore usually dates his transitional buildings earlier than is done by French writers.

Two points were announced as necessary to be proved. (1) Gothic architecture originated in France: (2) It was never practised outside of France. The first point is superfluous, being granted on all hands. Has Mr. Moore proved the second? It being conceded that Gothic is of French origin, when we find it in other countries it must be (a) either purely French or (b) modified by local artists or styles: no other categories are possible. Therefore, when Mr. Moore declines to call any English or Spanish buildings Gothic, because they are either purely French and therefore do not belong to the country, or because they have received local modifications and are therefore not purely French, it seems as if he were guilty of logical inconsequence. Canterbury and Westminster are French, and therefore there is no English Gothic; Salisbury and Wells are Anglicized, and therefore there is no pure Gothic in England. Even Mr. Moore is forced to grant that some of the Spanish cathedrals (such as Burgos, Toledo, and Leon) are quite pure in style, and all who have studied them will agree with him and not deny them a place, because, for example, the flying buttresses at Burgos are headed directly against the wall instead of

being received by a pier. One cannot fail to see that Mr. Moore is inclined to magnify divergences, and sometimes even to indulge in what resembles sophistry. He fully endorses a link in transitional Gothic, such as Laon or Noyon or Senlis, where the wall-space, for example, is still largely preserved, and the windows have not yet occupied the entire space between the wall-ribs; but he would deny the Gothicity of such an arrangement in a Spanish or English building erected ten or twenty years later, because in the meantime French architecture had reached a more advanced stage.

So much for general conclusions. I shall not enter into details except in one case—the discussion of Gothic in Italy. As, in the few pages here devoted to this most interesting subject, there are many grave errors, it seems hardly right to let them pass unchallenged. The first sentences are (p. 181): *During the twelfth century Gothic architecture had no marked influence upon Italy. The church of S. Andrea of Vercelli, which is said to have been begun in 1210, gives evidence, in its Gothic vaulting system, of transalpine influence; but it is an exceptional instance, and it was not before the middle of the thirteenth century that Italy began really to yield, in some measure, to the taste for pointed design.* Three assertions are here made, and each one is directly contrary to the facts. A considerable number of churches in Italy begun before or shortly after 1200 have cross-vaults, domed, with pointed transverse and wall ribs, both sexpartite and quadripartite on an oblong plan. Some of these churches are summarily described in Mothes' *Die Baukunst des Mittelalters in Italien*. S. Andrea at Vercelli, instead of standing as a solitary instance, is but one in a long series which begins in about 1170. It is a fact—though none of the hand-books and text-books appear to have embodied it for the information of travellers—that Italy contains a larger number of transitional buildings built at an earlier date and in a purer style than any to be found in either England or Germany. And yet we are continually being told by writers who, with their eyes shut, receive it as a tradition, one from another, that there was no pointed architecture worth mentioning in Italy until the middle of the XIII century.

The next step taken by Mr. Moore in his investigations of the Italian style leads him to speak of San Francesco of Assisi; then follows the stereotyped series of Sta. Maria Novella, Sta. Croce, and Sta. Maria del Fiore, at Florence; San Petronio at Bologna; etc. As an example of the carelessness and lack of investigation shown in this chapter, we cite the following (p. 186): *Of these cathedrals Siena and Orvieto are among the most important and characteristic. They differ little, however, from other vaulted pointed buildings in Italy except in general proportions, etc.* Now, Siena is not pointed and Orvieto is not vaulted, and both differ thoroughly from the buildings of Florence, Bologna, etc., in what ways it would be too long to state here. One more statement in this chapter (p. 191)

remains to be noticed: *The apsidal aisle never occurs, and the apse is never provided with really Gothic buttresses.* It is true that both of these features are rare in Italian buildings, but they do occur. Flying buttresses are used in San Francesco of Bologna (1236-45), in Sta. Chiara of Assisi (1258), in San Francesco of Assisi (1232-53), and, I believe, in Sta. Corona of Vicenza. Side-aisles around the choir are used at San Francesco of Bologna (1236-45) and in two great churches more or less dependent in style upon it, Sant' Antonio at Padua and San Petronio at Bologna (projected). Other examples are: San Francesco of Piacenza (XIII cent.); Sta. Sophia of Padova; the abbey-church of Sta. Trinita at Venosa; and the cathedral of Acerenza. The last two churches are in Southern Italy. Therefore, though the Italians clung tenaciously to the simple basilical apse, they were not without representatives of the richer type of the North.—A. L. FROTHINGHAM, JR.

EUGÈNE MÜNTZ. *Les Archives des Arts. Recueil de documents inédits ou peu connus.* Première Série (Bib. Int. de l'Art). 8vo, pp. 196. Paris, 1890; Librairie de l'Art.

M. Müntz is a most indefatigable searcher of archives, and appears to have an inexhaustible supply of documents relating to the history of art copied by him or for him. It is his usual habit to publish them in related series, as, for example, those on the Vatican Archives, the Medici Collections, the Arts at the Papal Court, etc. In the present instance, however, he gives us a miscellaneous collection, extending over a period of more than five centuries and related to nearly every country in Europe. Mediæval documents are published under the headings: *Giottino at Rome* (1369); *Notes on Tapestry in the Middle Ages.* To the Renaissance belong: *Accounts of the Ghiberti Gates; A new MS. of the Treatise on Perspective by Piero della Francesca; The Annunciation by Bernardo Rossellino at Empoli; Four letters of the medallist Melioli; Preface to the treatise on Arithmetic of Luca Pacioli; The atelier of tapestries of Milan in the xv century; The tapestries of Westminster under Henry VIII; Letters of Titian and of Giulio Clovio to the Duchess of Parma.* Nearly one-half of the volume is occupied with the text of letters of artists, archæologists or patrons and friends of art. Of these the most important series consists of Mariette's correspondence with the famous Venetian architect and writer Temanza (b. 1705, d. 1789). They date from 1766 to 1772 and relate almost entirely to works of art; they are of considerable interest as referring to many sales of collections and single works and as containing artistic judgments of value. Of less interest is the more personal correspondence of Millin with Nibby from 1813 to 1817.

The most interesting chapters are at the beginning of the volume: those on the tapestries of the XIII and XIV centuries, and on the manufactures of Urbino and Milan, are valuable contributions. If a number of volumes of a similar description are to follow, it might not be amiss to arrange their contents in a more orderly manner so as to facilitate consultation.

A. L. F., JR.

J. J. TIKKANEN. *Die Genesismosaiken in Venedig und die Cottonbibel*, 4to, pp. 153, 16 pls. Helsingfors, 1889.

A translation of the full title is: "The mosaics of the Book of *Genesis* at San Marco in Venice, and their relation to the miniatures of the Cotton Bible; together with an inquiry into the origin of the mediæval representations from the book of *Genesis*, especially in Byzantine and Italian Art." A part of this monograph had already been published in the *Archivio Storico dell'Arte*, 1888. A general enumeration of the iconographic material is first given, including early-Christian, early-Byzantine, Carovingian, Anglo-Saxon, and other Western monuments, late-Byzantine, Italian, and Renaissance, works. The mosaics representing scenes from *Genesis* are in the porch of San Marco. They have been published in full by Ongania, *La Basilica di San Marco*. Their peculiar style has led to the most diverse judgments regarding their date and school, different authorities varying 300 or 400 years, from the X to the XIII century. The compositions are grouped under the following heads: (1) *The first Creation-scenes*; (2) *Landscape*; (3) *Creation of man*; (4) *Fall*; (5) *Cain and Abel*; (6) *Flood*; (7) *Life of Noah*; (8) *Tower of Babel*; (9) *History of Abraham*; (10) *History of Joseph*; (11) *Life of Moses*.

This is followed by an æsthetic and critical commentary, and then by a careful and detailed comparison of these mosaics of San Marco with the miniatures of the Cotton Bible, in which each subject is examined in turn and is further elucidated by reference to other early monuments, especially manuscripts. The Carovingian Bibles, Caedmon's "Paraphrase," the Noailles Bible, Aelfric's Heptateuch, an English psalter (XII cent.), a French Bible (XII cent.), are all brought under contribution as showing parallel subjects. Examples are given in which early-Christian or Byzantine prototypes are copied and reproduced in late-Byzantine and Western Art. As the illustrated Bible, for the instruction of the people through artistic representations, became popular (beginning in the fifth century), several types of such illustrated series are to be found, under each of which a series of monuments may be grouped. Such are: (1) The Carovingian miniatures; (2) Late-Byzantine works depending on the Florentine Bible and the Vatican Octateuch; (3) The Venetian mosaics; (4) The Mount Athos Guide; (5) An Italian School of early origin. The differences between

the cycles of the Cotton Bible and the Vienna Bible are pointed out, the former being characteristically a monument of the transitional period from classic to early-Christian art. At San Marco these compositions of the v or vi century are translated into the artistic language of the xiii century. This is the author's conclusion. It is interesting and should not surprise us. Every day we are learning more of the traditional and enduring character of Christian art, of the reverential reproduction of earlier types. Thus is the diversity of judgments of the different authorities explained. The types, the composition, were of the early-Christian period; the execution, of the late Middle Ages.

The illustrations are numerous, and, though sketchy, serve to show the details of the various compositions and to make the comparison with other works clearer. As a study in Christian iconography the work will be of great value to students. The author's acquaintance with the monuments is fairly wide.—A. L. F., JR.

AMERICAN ARCHÆOLOGY.

DANIEL G. BRINTON. *Essays of an Americanist. I. Ethnologic and Archæologic. II. Mythology and Folk-Lore. III. Graphic Systems and Literature. IV. Linguistic.* 8vo., pp. xii, 489. Philadelphia, 1890; Porter and Coates.

The author's activity and the wide field over which his energies are displayed are very characteristically shown by these essays and by the four various headings under which they are grouped. Most of them had already appeared in print in some form. Their object is thus stated: *In a number of points, as for example in the antiquity of man upon this continent, in the specific distinction of an American race, in the generic similarity of its languages, in recognizing its mythology as often abstract and symbolic, in the phonetic character of some of its graphic methods, in believing that its tribes possessed considerable poetic feeling, in maintaining the absolute autochthony of their culture—in these and in many other points referred to in the following pages I am at variance with most modern anthropologists; and these essays are to show more fully and connectedly than could their separate publication, what are my grounds for such opinions.* Under the title ETHNOLOGIC and ARCHÆOLOGIC are grouped the following essays: (1) *Review of the data for the study of the pre-historic chronology of America;* (2) *On palæoliths, American and other;* (3) *On the alleged Mongolian affinities of the American race;* (4) *The probable nationality of the "Mound-Builders;"* (5) *The Toltecs and their fabulous Empire.* Under MYTHOLOGY and FOLK-LORE are treated: (1) *The sacred names in Quiche mythology;* (2) *The Hero-god of the Algonkins as a Cheat and Liar;* (3) *The Journey of the Soul;* (4) *The Sacred Symbols in America;* (5) *The*

Folk-Lore of Yucatan; (6) *Folk-Lore of the modern Lenape*. Under GRAPHIC SYSTEMS and LITERATURE the titles are: (1) *The phonetic elements in the graphic systems of the Mayas and Mexicans*; (2) *The ikonomic method of phonetic writing*; (3) *The writing and records of the ancient Mayas*; (4) *The books of Chilán Balam*; (5) *On the "Stone of the Giants;"* (6) *Native American poetry*. The last series is the LINGUISTIC, and comprises essays on: (1) *American languages and why we should study them*; (2) *Wilhelm von Humboldt's researches in American Languages*; (3) *Some characteristics of American languages*; (4) *The earliest form of human speech as revealed by American tongues*; (5) *The conception of love in some American languages*; (6) *The lineal measures of the semi-civilized nations of Mexico and Central America*; (7) *The curious hoax of the Tawusa language*.

There is a considerable variety in the quality and style of these essays: some are popular, others scientific. The material available to a man who, like Dr. Brinton, relies mainly on the data furnished by others, is used to very good purpose in attempts to prove various theories. To the uninitiated this volume may prove of unusual interest. The language is lucid; little is left to the fancy; the arrangement is unusually clear; the range of topics varied. In certain papers the specialist also may find new light cast upon old fields. It can be recommended as a contribution to the popularization of American antiquities.—A. L. F., JR.

ARCHÆOLOGICAL NEWS.

SUMMARY OF RECENT DISCOVERIES AND INVESTIGATIONS.

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GENERAL REVIEW.

The extent and variety of the material here presented in the department of excavation and investigation seem to require some preliminary remarks calling attention to the more important items of news and pointing out their bearing.

Unusual activity has prevailed of late in Africa and Asia, even though no discovery of paramount importance has taken place. In *EGYPT* the very useful work of clearing and repairing the principal monuments of Upper Egypt has been well begun with the aid of the travellers tax (see *Correspondence*, pp. 123-4), and the hope that this will be carried on so as to preserve from ruin the most precious works of Egyptian art makes us the less regret the fact that the Egypt Exploration Fund, after securing the permission to excavate at *Ahnes-el-Medineh*, the ancient Heliopolis, decided to do no work in the field this season. On the other hand, Professor Sayce's periodical trip has proved, apparently, the most important of those he has yet made, as is shown by his full letters. The vandalism he reports goes far to neutralize the official account of the increased efficiency of protective measures. Mr. Flinders Petrie resumed work on the sites opened by him last year in the Fayûm, at *Kahun*, *Illahun* and *Gurob*, and has added further data to those already found by him concerning the Aegean culture during the XII dynasty and the Mykenian culture during the XVIII dynasty. We await the publication of the results of his excavations with the greatest interest, as they may change our present conception of the age and origin of the alphabet and the relations between Egypt and the nations of the Mediterranean coast and islands. A number of sites in

ALGERIA and TUNISIA have been explored and excavated by French antiquarians without leading to remarkable discoveries, but M. Durighello, another French explorer, claims to have discovered in PHENICIA, at *Ach-Zib*, an untouched early Phœnician necropolis of considerable extent and with valuable contents. Such a discovery would be the first of its kind: archæologists had begun to despair of ever finding in Phœnicia any necropolis earlier than the Roman period. The Far East has yielded results of considerable importance in a variety of fields. Dr. Forchhammer reports on the monuments of BURMAH; M. Hamy on those of JAVA; Dr. Führer on the excavations at MATHURA which are so valuable for the history of the religions of India; and M. Senart on Græco-Indian sculptures in AFGHANISTAN. The American expedition under Dr. Peters has been at work in BABYLONIA on the sites of *Ur* and *Nippur* with good results in the way of inscribed tablets and cylinders. In PALESTINE, we are promised interesting results from excavations at *Eglon* by Mr. Flinders Petrie under the auspices of the Palestine Exploration Fund. There is little to report from ASIA MINOR beyond the fact that Dr. Schliemann—after having obtained, on the site itself, a retraction by Capt. Bötticher, of his opinion that *Hissarlik* was not a city but a crematory mound—has again begun excavations there with Mr. Dörpfeld with the intention of working for two years and bringing to light all the remains of the lowest stratum, representing the earliest city of Troy. The work of the Cyprus Exploration Fund has been more successful this year than last. It has been concentrated on the site of SALAMIS which proved to contain an inexhaustible supply of monuments, though the greater part are of late date.

In GREECE there has been a lull. After terminating the work on the Akropolis, the Greek Archæological Society has remained undecided as to the next theatre of its operations, and is terminating some excavations already in hand, such as that of the Athenian Olympieion. The German School has not undertaken anything new. The French School has finally decided, at the close of the season, to work at *Tegea*. The British School, although starting very late in its excavations at *Megalopolis*, has already been so fortunate as to make several discoveries, the most important being that of the plan and details of the theatre, which seems to equal in interest any of those yet known in Greece. The American School renewed work at *Plataia* under Dr. Waldstein, but as yet the three important temples of the city have not been discovered. At *Bourba* some primitive tombs were found interesting, as they are supposed to be earlier than the Mycenaean period. The work at *Lykosoura* has been continued with success, and the importance of the colossal group of statuary by Damophon becomes very apparent, as it shows, from his *chef-d'œuvre*, the style of one of the great masters of the fourth century, hitherto known only by name.

From many sources there have been made great additions to the *Central Museum* in Athens, and we are glad also to announce the opening of a *Museum of Greek Christian Antiquities*. In connection with this we cannot pass over in silence the admirable undertaking of some members of the British School to reproduce all the Byzantine monuments of Greece, many of which are disappearing from day to day, as they are without the protection so liberally accorded classic monuments.

In ITALY, a few discoveries stand out in bold relief. The great Ionic temple at *Gerace* in Southern Italy, on the site of the city of the Locrians, is found to have risen on the ruins of an archaic temple. Being the first Ionic Greek temple thus far discovered in Italy, it is exciting great interest, and has been visited from Athens by Dr. Dörpfeld and from Rome by Dr. Petersen, Secretaries of the German Institute. A complete Etruscan city of the fifth century is revealed to us at *Marzabotto*, near Bologna, under Brizio's magic touch, and for the first time we can form an idea of the arrangement of the Etruscan streets and houses, their sanitary dispositions, and the life of their inhabitants. It shows that the Romans borrowed from the Etruscans on all these points. No special mention need be made of the various excavations in the field of Italian prehistoric antiquities in the terremare of *Castellazzo*, in the archaic Villanova necropolis at *Bologna*, except in so far as they bear upon the important question of ethnology—of the ethnic relation between Etruscans, Umbrians and other Italiots. In this connection it is interesting to note that the indefatigable Orsi has opened up, in the necropoli of *Sicily*, a relatively new field of prehistoric antiquities, important especially because Sicily seems to hold out one hand eastward to the islands—such as Krete, Kypros, Rhodos—and the Mykenai culture, while the other is extended northward to the regions of Upper Italy. In *Rome*, a relic of the early city has been found in a part of the tufa viaduct built in the early-Republican period across the Tiber to span the marshy land and to establish communication between the Palatine, Cæstian, and Janiculan bridges. From *Pompeii* comes the news of a discovery which may put an end to the controversy as to whether the eruption that destroyed the city took place in August or in November of 79. It consists of the impress and remains of a laurel-tree with its fruit, which is known not to ripen until November, thus showing this to be the period of the eruption.

In FRANCE, excavations are continued in several Merovingian cemeteries. In AUSTRIA-HUNGARY, a very extensive necropolis of early date has been excavated at *Lengyel*. In GREAT BRITAIN, the Celtic cemetery at *Aylesford* suggests to Mr. Evans the existence of early and close relations between Gaul and England comparable to those that existed later between England and Normandy.

AFRICA.

EGYPT.

COPPER AND BRONZE OF ANCIENT EGYPT AND ASSYRIA.—In the *Proceedings* of the *Society of Biblical Archaeology* (March 4, 1890), Dr. J. H. Gladstone publishes some results of an examination and analysis which he had made of the copper and bronze tools found by Mr. Flinders Petrie in Egypt during the past year, as well as of other Egyptian, Babylonian, and Assyrian metal objects. The tools of the XII dynasty, found at Kahun and dating from about 2500 B. C. were examined with great care and curiosity to ascertain the important question of the presence or absence of tin. A hatchet was found to contain: copper 93·26; arsenic 3·90; tin 0·52; antimony 0·16; iron 0·21: total, 98·05. The analysis of a round chisel resulted in: copper 96·35; arsenic 0·36; and tin 2·16: total, 98·87. These are a good sample of the whole. In none of them was any zinc detected. It is evident, therefore, that these earlier alloys have no right to be called brass; and probably they should be designated as imperfectly purified copper, rather than as bronze. It is difficult to fancy that such small quantities of tin were purposely added; it is, however, easy to suppose that the ancient Egyptians found certain ores of copper more suited to their purpose than others. It was declared by Professor Roberts-Austen that either two per cent. of tin or three per cent. would have great influence in hardening copper, which in a pure state would not be suitable for cutting-utensils. As time progresses, the percentage of tin increases; thus, in tools and figures of the New Empire the percentage of copper is only from 87 to 89 while that of tin has risen to 6 and 7 per cent. Passing from this date, 1200 or 1300 B. C., to the ninth century, we find that the Balawat gates of Shalmaneser II (859-25) contain in the band less than 74 per cent. of copper and over 9 per cent. of tin; in the bolt, 70·7 of copper and 7·15 of tin. These proportions resemble those usually found in ancient bronze, and those of modern gun-metal. The use of bronze had become very widespread, and was the principal metal used by the early Israelites, even when iron and steel would have been far more suitable. It would appear that in the latter part of the stone age there was what has been termed a pre-bronze age, in which copper ores were melted and the metal used for implements. A careful and detailed study would show how the stone implements were gradually replaced by those of copper, and how, by increasing the amount of tin, this was changed into the more valuable alloy of bronze.

LETTERS FROM A. H. SAYCE.—Professor Sayce writes from Egypt (Feb. 9, 23, March 12):

DESTRUCTION OF THE ANCIENT MONUMENTS.—A year and a half ago

a society was formed for the protection of Egyptian antiquities, the only practical result of which has been the imposition of a tax of 100 piastres upon every person who wishes to visit the great monuments of Upper Egypt. The temples of Denderah, Abydos, Esneh, and Edfu are neither better nor worse protected than they were before; the newly-cleared ruins of Luxor are allowed to become the refuse-heap of the villagers; no attempt has been made to enclose Karnak. More havoc has been wrought among the monuments during the last three months than during the whole of the last half-century. The famous tombs of Beni-Hassan have been hopelessly mutilated, the curious bas-reliefs of Tel el-Amarna have been hewn from the walls, and the cartouches have been cut out of the tombs of the VI dynasty at El-Bersheh. In the well-known "Tomb of the Colossus," and its immediate neighborhood, the hand of the destroyer has been most ruthless. The floor of the tomb is strewn with the fragments of the paintings and hieroglyphs with which its walls were once adorned. The hunting-scene, carved in delicate relief on a stone at its entrance, and interesting on account of certain figures in it being drawn according to the modern rules of perspective, has been wantonly smashed to atoms. Just below the Tomb of the Colossus was another and smaller tomb of the XII dynasty, the walls of which were covered with inscriptions in a perfect state of preservation. It is pitiable to enter it now. Of a large part of the text nothing remains but a hasty copy made by myself four years ago. Even the tablet of Thothmes III, at the entrance of the quarries near the tombs, has been defaced beyond recognition. The work of destruction has been carried out in order to provide the dealers of Ekhnaton and Luxor with fragments of inscribed stone which they may sell to tourists. But it is not only the dealers who are thus allowed to destroy tombs like those of Beni-Hassan which are supposed to be under the charge of salaried "guardians;" the work of blasting the historical rocks of Assiout still goes on merrily, and a tomb which was discovered there when I last visited the place is already partially quarried away. The VI-dynasty tomb at Qasr-el-Syâd, with its important paintings and texts, described by me in the *Academy* some years ago, has fallen a victim to the quarry-men; and the old quarries of the Gebel el-Tûk, with their curious Greek and demotic inscriptions, are now in their hands. The Ptolemaic temple of Toud, eight miles only south of Luxor, with its un-copied texts, is fast disappearing, Mr. Insinger tells me. When I saw it eight years ago it was in a comparatively perfect condition. It is evident that whatever inscriptions there are above ground in Egypt must be copied at once if they are to be copied at all.

DISCOVERIES.—So far I have not myself done much in the way of hunting out or copying new texts. At the northern end of the **GEBEL ABU-FEDA**,

however, I found some Greek tombs, besides another with the name *Pha-i-ya* above it in Cypriote letters, and a short Karian text. At **TEL EL-AMARNA** we came across some potsherds with hieratic inscriptions upon them, as well as fragments of pottery of the same color and make as the fragments discovered by Mr. Petrie at Tel el-Gorob and inscribed with the same characters or marks. The discovery confirms Mr. Petrie's belief that the characters would be found at Tel el-Amarna if the mounds there were properly searched. It also confirms my belief that the origin of the characters is to be sought in the hieratic forms of the Egyptian hieroglyphs. A little to the north of Negâdeh, we stopped at the village of **NEYLET TUKH**, as I had been told that antiquities were to be met with in the neighborhood. About two miles inland, and beyond the cultivated land, we found a site of an old city, with four early rock-cut tombs above it, and the ruins of a Coptic monastery to the north. The tombs, which had once been painted, had lost all traces of ornamentation; but my companion, Mr. Robertson, picked up a terracotta stamp on the site of a fortress which overlooked the old town. The stamp bears the cartouche of *Ast-n-kheb* the consort of *Ra-men-kheper*, who was high-priest of Amen in the age of the **XXI** dynasty. Two and a half miles to the south is the site of another town strown with Roman and Coptic pottery. I was shown there a large stone sarcophagus of the Roman period which has lately been disinterred by the *fellahin*.

Since leaving Luxor, in company with Mr. Wilbour, we have visited some quarries near **DEBBABIEH** and opposite Gebelén, which were discovered by M. Daressy last year. He found in them an inscription of a king who calls himself *Nesi-Ba-(n)-tatni*, the *Smendes* of *Manetho*, who headed the **XXI** dynasty. The inscription sheds a welcome light on an obscure period of Egyptian history. It was recopied by Mr. Wilbour, while I recopied another hieroglyphic text on a tablet in a neighboring quarry. I also copied some Greek inscriptions which had been noticed but not copied by M. Daressy. They are dated in the reigns of Alexander and Antoninus Severus, and give us the names of some local deities as well as of the place in which the quarries are situated. To the south of **Debbabieh** are a number of tombs which M. Grébaut has excavated; south of these again is a tomb of the **XII** dynasty, where I copied what remains of the paintings and text. Our only new discovery, however, has been an isolated sandstone rock, south of **EL-QAS**, which was quarried in old times and is adorned with some curious sculptures, among them that of the god *Bes*, in a new form. Both at **ABYDOS** and **QURNAH**, vases have lately been found like those discovered by Mr. Petrie at Tel el-Gorob, which in form, ornamentation, and color, are identical with the so-called *Mykenaeen* vases of

the first style. At Abydos they are found along with vases which resemble those found in the prehistoric tombs of Cyprus.

I paid a visit to the ISLAND OF SEHÊL, midway between Assuan and Philæ, where Mr. Wilbour was employed in copying two inscriptions of considerable historical importance. The southern end of this island, as is well known, is a perfect treasure-house of hieroglyphic texts, incised upon the granite rocks and boulders. The island was, from early times, the sanctuary of the deities of the Cataract, before its holiness and fame were superseded by the later attractions of Philæ. Most of the inscriptions face a ravine in the southwestern part of the island; and, led by this clue, we discovered the site of the ancient shrine, the central object of pilgrimage to the pious Egyptian of Pharaonic days. Fragments of the sandstone *naos* are still lying on the ground among the *débris* of the old sanctuary. By the side of them is a stele of the age of Thothmes III, still perfect; and at what was once the back of the chapel is a long inscription, accompanied by sculptures, apparently of the Ptolemaic period. In the neighboring village of Sehêl, I found stones which had come from the ruined sanctuary, and bore the cartouches of Ptolemy Philopator, showing that the shrine had been repaired or enlarged in his reign. I also copied a stele of the same epoch, which had been built into the wall of a native house.

North of Sehêl, on the western bank of the river, I discovered the site of another sanctuary. It is marked by a large boulder of granite, which commands an extensive view, and is close to a modern Sheikh's tomb. The latter is about a couple of miles south of the Qubbet el-Hawa, underneath which Sir Francis Grenfell disinterred a series of ancient tombs. The rock is covered with hieroglyphic invocations to Khnum, Sati, and 'Anq, the deities of the Cataract; and the remains of a chapel of sandstone lie round about it. Among these are a broken stele, which mentions "the land of ebony," and a seated statue in a barbaric style of art, which has on the back an inscription in unknown characters. An old road leads westward from the sanctuary to some quarries, where I found the remains of tombs of the Roman period. The dead were buried under the shelter of the rock in rectangular coffins of terracotta, which resemble troughs with lids. A cairn of loose stones was piled over them, surrounded with a circle of stones. In some instances I found the name of the defunct cut in the rock above the tomb. Almost all the names are Greek or Latin, like Sokrates and Marius, though the names of the fathers are Egyptian. One of the pilgrims to the sanctuary was a certain scribe and captain of the archers, named Thoth-m-hib. The same individual has left a memorial of himself in Sehêl; and I discovered another very curious record of him on a rock in the western desert, about three miles to the north of Assuan. Here he describes himself as "divine prophet of the temple of Pa-Khnum." The

inscription is accompanied by a drawing of five magnificently equipped dahabiahs, and a sort of small boat below them. Five men are rowing the foremost dahabiah, above which Thoth-m-hib is represented as walking with a crooked stick in his hand, an Assyrian cap on his head, and a strange kind of cape over his shoulders, while a naked slave follows with an umbrella, and a dog runs by his side. A giraffe is standing in one of the dahabiahs. Two hippopotamus are depicted on one side of the inscription, and two ostriches on the other, a long-horned gazelle being above them. The position of the ostriches seems to indicate that they were found in the locality at the time, though the giraffe was being imported from some district further south.

Unfortunately it is impossible to fix the date of Thoth-m-hib; but, on the summit of a cliff on the western bank of the river a little to the north of Kom Ombo, we found a similar *graffito* in honor of the prefect Rekh-mâ-Ra, whose tomb at Thebes is familiar to Egyptian tourists. Here the inscription is accompanied by the delineation of a donkey, of a dog pursuing a long-horned gazelle, of another dog facing a gazelle, of a man leading a horse, and of a boat or dahabiah. Opposite the cliff are some quarries, where we discovered the cartouches of Apries carved in large size on the rocky wall. Not far off is a tablet with a Coptic inscription in fifteen lines with a Kufic text underneath, the letters of which are in relief. There are a few hieroglyphic *graffiti* in the neighborhood, and the words "Alkimios, the twelfth year," in Greek characters.

Mr. Greville Chester had informed me that inscriptions were to be found on a line of rocks on the western bank south of HESHÂN, and about four or five miles north of Silsilis. We accordingly spent a day examining them. They were especially plentiful at the corner of a *wadi*, which seems to be nameless. Besides hieroglyphic and hieratic *graffiti*, I copied a large number of Greek inscriptions, some dated in the reign of "Ptolemy, the son of Ptolemy, and Queen Berenikê," while a few belonged to a pre-Alexandrian age. As the writers describe themselves as paying "a vow," it would appear that the place was accounted sacred. One of the inscriptions, dated in "the second year," states that Artapates—whose name reveals his Persian origin—had been appointed *stratêgos* or general. The most important part of my discovery, however, consisted of six Phœnician inscriptions, the authors of which offered their prayers to Isis, Horus, and Khnum. One of the names occurring in them is Abed-Nebo, the prototype of the Abed-Nego of the book of *Daniel*. The rarity of Phœnician inscriptions in Egypt adds an interest to this discovery. Besides the Phœnician inscriptions, I also came across a short Karian *graffito*, and a twice-repeated Kypriote text. On one occasion the latter was accompanied by what look like Hittite hieroglyphs. Can it be a bilingual? The

inscriptions are accompanied by multitudes of animals and birds, some of which are drawn with considerable skill. Men and boats also occur frequently; and the drawings are found not only on the rocks near the river, but also inland in the *wadis*. The drawings are of all ages. As we have seen, the inscription of Rekh-mâ-Ra shows that some must belong to the time of the XVIII dynasty, while others are evidently of very recent origin. But I have convinced myself that Mr. Petrie is right in holding that many of them go back to a prehistoric epoch before the introduction of writing. The weathering they have undergone would alone show this. On the famous inscribed rock of El Qab, for instance, there are drawings of animals by the side of which the accompanying hieroglyphic texts of the VI dynasty look quite modern. Above Heshân, again, the animals most commonly represented are the giraffe, long-horned gazelle, and ostrich, the hippopotamus, elephant, and ox occurring more rarely. Though the gazelle is still found in the neighborhood, the presence of the giraffe implies wooded plains in place of the arid desert which during the historical epoch has extended almost to the water's edge from Edfu southwards, while the absence of the ostrich from the hieroglyphic syllabary indicates that it had become extinct in Egypt when the latter was formed. The earlier drawings have reminded me forcibly of the Bushman paintings on rocks now in the possession of Miss Lloyd. The animals are drawn with the same degree of spirit and in similar attitudes, the delineation of the human figure being in both cases immeasurably inferior. It is well known that the Bushman race once extended further to the north than is now the case, while history shows us the Egyptians pushing the native races further and further towards the south. The drawings on the rocks seem to be connected with the cairns and circles of stones which cover the summits of the cliffs from the neighborhood of Heshân southward. These "rude stone monuments" deserve a careful examination. Major Ross has found worked flints in the great desert behind Kom Ombo at the foot of the mountains, and Mr. Petrie picked up a water-rolled palaeolith on the hills behind Edfu.

At ESNEH I found the base of a granite column with the cartouche of Ramses II, now used for mooring purposes. As it has come from one of the two temples which once stood at Esneh, we may see in it an evidence that Ramses II was a builder here as in other places in Egypt.

By way of a conclusion to my letter I must draw attention to an ostrakon from KARNAK which I have acquired, and which is unlike any other I have ever seen. The text upon it runs as follows: "O my lord Isidoros, come and bring me the commentaries (*λίξεις*) on the first book of the *Iliad* for which I have asked you." The potsherd has survived, but where is the manuscript to which it refers?

I have made a discovery of too great an importance for Egyptian archaeology not to be made public at once. The tomb and mummy of Amenophis IV, the "Heretic King" of Egyptian history, have been found at **TELL EL-AMARNA**. It is from thence that the cuneiform tablets about which so much has lately been written have really come, not from the place falsely indicated to me and others as the locality in which they were found. The tomb has proved a second pit of Dér el-Bahari to the antiquity-dealers of Ekhnâ, by whom it has been worked. Now that it has been despoiled of the precious objects it once contained, they have condescended to inform us of its exact position. On my way down the Nile I hope to visit it, and see if the inscriptions upon its walls are still serviceable for science. The mummy of the king has been torn to pieces. The fragments of a royal mummy which were offered for sale at Luxor two years ago were derived, not from the opposite cliffs of Thebes, but from the capital of the Heretic King. The beautiful objects of ivory and alabaster which have lately been in the market of "antikas," the bronze rings and enamelled porcelain which bear the cartouches of Amenophis IV and the solar disk, the delicate glass and bracelets of solid gold which have been offered for sale to travellers, have all come from the desecrated sepulchre. The discovery, unfortunately, took place at a time when an attempt was again being made to put in force the law against the sale and exportation of antiquities—with the inevitable result that the discovery was concealed, the objects found were dissipated, broken, or hidden away, and information invaluable to the historical student irretrievably lost. More than one mummy has been found, and the discovery of the royal tomb has, I am told, led to the discovery of others.

LUXOR.—*Collection of Rev. C. Murch.*—One of the attractions presented by Luxor to the archaeologist is the collection of Egyptian antiquities formed by the Rev. C. Murch, of the American Mission. His collection of scarabs is one of the finest in the world, and the numerous royal names it contains makes it particularly interesting. Among them is the name of "Ahmes, the chief wife of the king" and what Mr. Petrie reads as "prince of the mountains, Khian." Many of them record the names of private persons, more especially of the "feudal chiefs" who lived under the XII and XIII dynasties. There are also three scarabs of the age of the XIII dynasty, which belonged to certain "captains of the king's thirty"—a title which we found among the *graffiti* on the rocks north of Silsili. Mr. Murch also possesses one of the large "hunting scarabs" of Amenophis III, describing the number of lions slain by the king in his tenth year, as well as numerous rings of blue and green porcelain inscribed with the cartouches of the monarchs of the XVIII and XIX dynasties. Mr. Murch's collection is particularly rich in small objects bearing the name of Khu-n-Aten, which have probably come from the tomb of "the Heretic

King," about which I have already written to the *Academy*. He has also a terracotta stopper of a vase from Tel-el-Amarna, which gives us the hitherto unknown cartouche of one of Khu-n-Aten's immediate successors, and seems to read *Toui-uar-n-hib-n-Aten-mes-Aten* (Mr. Wilbour has a similar stopper with the same cartouche). Another unknown cartouche is found on a large blue porcelain stamp, but the period to which it belongs is late. The gem of the collection is a large cylinder of creamy semi-opaque glass, which forms the outer coating of a cylinder of porcelain, and on which are incised the name and titles of Nofer-ka-ra. As the titles show that this must be the Nofer-ka-ra of the VI dynasty, we may see in the cylinder the oldest piece of dated glass in the world. Among other noteworthy things in the collection may be mentioned glass beads of the most variegated and beautiful patterns—some of which are as early as the time of the XVIII dynasty—small objects of gold (one of them representing a human figure with a serpent's head), a large stone heart with a human face inscribed with a chapter from the *Book of the Dead*, and several strange figures of the god Bes of the Roman epoch. One, for example, of blue porcelain represents the god on the top of the *uar* sceptre, with Horus in one hand, an apple in the other, and a monkey below. Another places him on the back of two crocodiles, with Horus standing behind, and Isis on either side. Mr. Murch possesses two chevron beads of enormous size—one no less than six inches in circumference, of the class about which Miss Buckland raised a discussion before the Anthropological Section of the British Association at Bath. My companion, Mr. Robertson, bought a bead of the same kind at Qeneh, which had been found in a tomb at Denderah, and is, therefore, presumably of the Græco-Roman age.

When at Ekhmin I was enabled, through the kindness of M. Frénay, to carry out a long-projected excursion to the **WADI SHÉKH SHEHÛN**, some miles to the southeast of the town. The Wadi is mentioned by Pococke, who describes it as containing a natural spring of water and a few Coptic chapels, and was re-discovered by Prof. Maspero. Its length and ruggedness, the height of the precipices which rise up sheer on either side, the cascades of stone over which the water has once made its way, and the unexpected verdure which springs up like an oasis where the water still gushes forth from the rock, combine to render the scenery not only unique in Egypt, but hardly to be matched elsewhere in the world. About a mile from the entrance of the gorge is a huge boulder covered with the names of travellers. The inscriptions are mostly Coptic, but one is in Nabathæan characters, and is dated in the third year of Malchas; while there are some curious Greek texts which inform us of the existence of a club of hunters at Panopolis or Ekhmin. At the head of the club was an ἀρχικύνητος, or "chief huntsman;" and its members were called θηροφυλακιπολιτικοί.

καὶ κεντροὶ ἐπὶ τὴν θηρὴν. A little to the south of the entrance of the Wādī have been found the small tablets of wood which bear Greek and demotic mortuary inscriptions. South of the Gebel Shékh Heridi, where the cliffs are known as Gebelén, I discovered some quarries with some curious representations in black paint of scenes from the *Iliad*. The warriors are in Greek costume, and are accompanied by demotic inscriptions, too much injured, however, for one who is unacquainted with demotic to attempt to copy them. By the side of the Homeric pictures are representations of the god Min, of Horus, and other purely Egyptian figures, though the delineation shows that the artist must have been the same in each case. On the rocks above the well-known quarries of the Gebel Shékh Heridi itself my companion and I found the cartouches of Apries, which do not seem to have been noticed before; and near the northern extremity of the cliffs, a little to the right of some large quarries, he discovered the cartouches and titles of Ramses III carved on the face of the cliff. Between the cartouches the king is standing bareheaded, with the solar orb and the symbols of life above him. His hands are held by Horus on the right and Amon-Ra on the left, and the symbol of life is held towards his face by the two gods. The whole tableau is twenty feet in height and forty feet eight inches in length, the figure of the king being sixteen feet high, while the cartouches at the side are each twelve feet high and four-and-a-quarter feet broad. The sculpture is similar to that near the ancient necropolis of Nineveh, discovered by myself some years ago, and afterwards described by Mr. Oliphant. It is evident that the quarries were worked by Ramses III, and we may, perhaps, infer that he built in the neighboring city of Antaeopolis.

Prof. Maspero asked me to examine the tombs in the **GASEL SELIN** (or *Sala-eddin*) on the eastern bank of the river, about fifteen miles south of Siût, which were reputed to belong to the age of the V and VI dynasties. I have spent a long day among them, carefully examining the cliffs from behind Dér el-Tasseh, northward to El-Khowâleh. There are many ancient quarries in the cliffs, most of which are being blasted away by modern quarrymen, and an immense number of tombs. None of the tombs which are accessible, however, contain any vestige of inscription or ornament, save only a solitary Greek *graffito*; and there is absolutely nothing about them to indicate their age. But, besides the tombs which are accessible, there is a large number which are inaccessible. These are cut high up on the cliff, which has weathered away below them; so that for untold centuries they must have remained unapproached by man. They may be among the oldest tombs now existing in Egypt. Most of them are provided with a small square window; in some cases there is a window cut in the rock on either side of the entrance. Unlike the tombs below them, they show no traces of any attempt to represent the posts or lintel of a door. The

only place in which I found any inscriptions were in some large quarries behind El-Khowāleh, where I came across a good many demotic inscriptions in red paint, the figure of a Greek mercenary brandishing a sword, and the façade of a temple. The Copts had turned one of the quarries into a church, and had covered the walls with paintings and texts. About a quarter of a mile to the south of the quarries an enormous altar has been cut out of the rock; on the top of it are two hollow basins, and a path has been excavated around it.

I believe that in my last letter I forgot to say that we discovered the site of the ancient necropolis of **KOM OMBOS** when on our way from Assuan to Luxor. The present village of Shoth, southeast of the ruined temple, stands on a portion of it. The diggers of Qurnah have already been busy there; from one of the tombs they have opened Mr. Wilbour extracted the fragments of a mummy-case of the Greek period. The character of the necropolis resembles that of Tell es-Semaineh (or rather Kom Mehras). Both alike consist of vaulted tombs of crude brick slightly sunk in a plateau of loose soil, which rises just above the level of the cultivated land.—*Academy*, March 1, 15, 29.

HIERATIC PAPYRUS.—At a meeting of the Society of Antiquaries (London, Jan. 30) Mr. E. A. W. Budge read a paper on a hieratic papyrus in the British Museum inscribed with (1) the *Festival Songs of Isis and Nephthys*, composed for the service which was celebrated in the temple of Amen-Rā at Thebes; (2) the additional *Litanies of Seker*, which also were sung at this festival; and (3) the *Book of the Overthrow of Apepi*, the enemy of Rā, and the *Book of the Becomings or Evolutions of Rā*. It was discovered at Thebes by Mr. Rhind in the year 1862. It is written in a fine small hieratic hand, but some of the characters have forms which, with very slight modification, become those we are acquainted with in Demotic. According to one of the colophons the papyrus was written in the twelfth year of the reign of Alexander, the son of Alexander (B. C. 305). As Alexander II began to reign B. C. 317, but was murdered in B. C. 311, it is clear that the writer has added the years of the interregnum to those of the reign of Alexander II. The colophon was probably added to the papyrus some years after the other parts of it were written. The papyrus was written for Nesi-Amsu, the son of Petā-Amen-suten-taiu, a "prophet" who held various dignities in nearly all the temples of Thebes. The date in the colophon does not indicate the antiquity of the compositions, for in the course of the work we more than once find the words "otherwise said," so the works are sufficiently old for several copies of them to have been made and for variant readings to arise. The first two compositions were written by the same hand, the third by another. The strips of papyri were then joined together, and formed part of the stock-in-trade of an ancient Egyptian who made it his business to

supply such works to friends of dead people, who bought them to bury in the tombs. Between the first and second compositions in the papyrus is written a series of curses which, it is hoped by the writer, may fall upon the person who ventures to look upon it or carry it away. The *Festival Songs of Isis and Nephthys* and the *Litanies of Seker* were sung in the temple of Amen by two young women intended to represent Isis, the wife of Osiris, and Nephthys, his sister. They were to be ceremonially pure, they had their heads bound with woollen tiaras, and their songs were accompanied by the music of the tambourine. The songs were led off by the precentor, and the women took it in turns to address pathetic appeals to the Sun-god to return to his temple and to his "widows" who pined for him. There is no rhyme, but there is a rhythm which, though occasionally monotonous, is not unpleasing. The unity of the Sun-god is unequivocally declared, and the various parts that he performs in the government of the material and spiritual worlds are described. For comparative mythology these songs are of value, and the new words they contain will be a gain to the Egyptian dictionary. The author is not named, and it is not possible to say exactly when they were composed; they are, in many respects, similar to the *Lamentations of Isis*, which are found in a Berlin papyrus. The third and last work contains a full account of the defeat and slaughter by Rā, or the Sun-god, of Apepi his enemy. The rubrics say that the chapters of this work were recited so many times a day in the temple of Amen-Rā, and that certain acts had to be performed while the priest recited these chapters. A wax figure of Apepi was made, and upon it his name was written in green ink; this figure was placed in a papyrus case upon which Apepi's name had been written in green ink. At a certain time of the day this case, with the figure in it, was put in a grass fire and slowly burnt. The prayers for the slaughter of Apepi by Horus being said at the same time, it was believed that the powers of the mist, darkness, and cloud would be overcome by the piercing rays of Rā. This custom is, no doubt, the origin of the old practice of attempting to cause harm to people by burning wax figures of them. It obtained in Egypt as early as 1300 B. C. It calls to mind the tradition about Nectanebus, the last king of Egypt, who maintained his hold upon Egypt by being able to destroy the armies of hostile kings by means of his magic worked with wax figures and a bowl of water. Toward the middle of the *Book of the Overthrow of Apepi* there is inserted a remarkable work describing the origin of gods, men, and things. In it the "universal god" in the form of Chepera, the self-begotten, is represented as speaking. He describes the waste and void condition of the earth and the non-existence of anything. There was not even a spot for him to stand upon, and he was quite alone. He by himself planned everything, and gods, men, and things came into existence from his evolvings.

He was a husband to himself, his shadow was his wife. Shu and Tefnut were the gods that were first born, and the god says, "Thus from one god I became three gods." The great god Chepera weeps, and men and women spring into existence from the tears which fall from his eyes. Shu and Tefnut then gave birth to Seb, Sut, Osiris, Isis, Nephthys, and the other gods at one birth, and "their children multiply upon the earth." The text of this cosmogony exists in the papyrus in duplicate, and what one version lacks is supplied by the other. At the end of the work is a hymn to the Sun-god, who is described as having utterly overthrown Apepi, followed by several rubrics containing prescriptions for magical procedure.—*Athenæum*, Feb. 8.

THE TELL EL-AMARNA TABLETS.—According to a paragraph in the *Athenæum* of Nov. 2, M. Renan has lately expressed doubts with regard to the genuineness of the Tell el-Amarna tablets. May I, therefore, submit one or two arguments in support of the opposite view, drawn from the internal evidence of the documents themselves?

The forms of character in which the letters are written are not identical with any cuneiform script hitherto known. Nevertheless they can often be shown to have their proper place in the natural course of development from the most archaic to the latest forms, which had already been traced in the inscriptions of Assyria and Babylonia from the times of Gudea to the seventh and sixth centuries B. C., and is well illustrated in the *Tableau Comparé des Écritures Babylonienne et Assyrienne Archaïques et Modernes*, by Amiaud and Méchineau. This development is a process of decay in which certain of the wedges composing the characters fall off, and others are combined in recognized forms. Now the characters in the Tell el-Amarna tablets have generally reached that stage of decay which might be expected in the fifteenth century B. C., and retain more of their archaic completeness than the writing on the cylinders of Tiglath-Pileser I, which belongs to the twelfth century. While the preceding remarks hold true of the collection in general, there is a considerable variety of character to be observed among the particular tablets according to the place of their origin, and also sometimes according to the peculiar handwriting of the different scribes. Thus, the letters from Mitanni and the letters from Alasiya show different forms, and both classes again vary from the Phœnician and Canaanite letters. This is in agreement with the laws of palæography, and at the same time would greatly complicate the work of a forger.

It cannot be supposed that the Babylonian language was in use in Phœnicia or Canaan at this time. It must have been a foreign language, used only in official correspondence. The script, too, was doubtless foreign. Accordingly, we find that mistakes are made, such as the combination of the first person plural with the first person singular. The letters are not

only written in general after the simplest phonetic method, with very few ideograms, but some scribes, notably those of Mitanni and Alasiya, are very careful even to express the vowels where an Assyrian would not. There is one scribe who employs ideograms, but subjoins the phonetic spelling, a peculiarity which may indicate a want of familiarity with their use. Besides this, there are modes of writing words which are unknown or very rare in the inscriptions of Assyria and Babylonia. The hieratic dockets form another proof of genuineness. As for the matter of the letters, which refer chiefly to the appointment of governors for the subject towns, to occasional rebellions, and to alliances between Egypt and the neighboring kings, it consists of nothing which might suggest that the documents are spurious. The external appearance of the tablets is such as to satisfy every one accustomed to such relics of antiquity. Nor would the slightest uncertainty have arisen in the minds of those who are not specialists, if it had not been that the discovery of the influence of Babylonian culture throughout Western Asia at this almost unknown period of history is, at first sight, rather startling. On the other hand, all that was known from Egyptian sources of this period is illustrated and confirmed by the tablets from Tell el-Amarna.—B. T. A. EVERTS.

EXCAVATIONS IN THE FAYÛM.—W. M. Flinders Petrie writes to the *Academy* (April 5): Last October I resumed work on Kahun, the town of the XII dynasty from which I had obtained the things exhibited during the summer in London (*JOURNAL*, v, 480); and in November my friend Mr. Hughes-Hughes took up the work at Gurob, the town of the XVIII-XIX dynasty.

ILLAHUN.—During my absence in England, Mr. Fraser, who kindly took charge of the place, had succeeded in entering the pyramid of Illahun, by a well which I had partly opened before I left. The arrangement of the pyramid is quite different to that of any other known. A shaft over forty feet deep descended from beneath the pavement near the southeast corner; thence a gently sloping passage led up in the rock to two chambers, not under the centre of the pyramid, but nearer to the shrine on the east side. The first chamber was lined with limestone, of which much had been removed, probably in Ramesseid times; the inner chamber was lined with red granite in the same way as the sepulchre of Menkaure at Gizeh. It contains a red-granite sarcophagus, without a trace of lid or contents. The form is strange, having a large rectangular lip or brim around the top. The sides are exquisitely flat and smooth, being dull-ground, but not polished. Their equality and regularity is astonishing, the errors of work being mostly one or two hundredths of an inch; and all the dimensions are in exact numbers of cubits and palms. It is the most brilliant piece of mechanical work yet known in Egypt, or perhaps in any other country.

In front of it was the alabaster table of offerings for Useresen II, whose name I had previously found in the temple of this pyramid. A small pyramid, of which I discovered the base to the northeast of the large pyramid, I have now carefully cleared all around; but no trace of an entrance can be found. The occupant is, however, known from fragments of the external shrine, which bears the name of a Princess Atmu . . . (?), probably a daughter of Useresen II.

TELL KAHUN.—At Kahun the remainder of the town was cleared, and all the houses planned. We now possess the complete design for a town as laid out by an architect of the XII dynasty. The larger houses have an *atrium*, with a small tank in the midst, at a little way from which are the surrounding columns, usually four on each side. These columns were of wood or stone; and a part of a wooden capital shows the palm type, which was as yet quite unknown to us at so early a date. The principal objects found are a basalt statuette of Si-sebek, an official; a seated figure in limestone; a most naturalistic ivory carving of an ape seated; a large wooden door with traces of cartouches and a scene of Usarkon II (probably brought from some tomb in later times); a wooden stamp of Apepi; a large number of flint implements, wooden and bronze tools, weights, and many more of the apparently alphabetic marks on pottery. Outside of the town the rubbish heaps of the XII dynasty were found; beneath and mixed with the pottery of that age were pieces of Aegean pottery, with rude decoration which, though barbaric in its style, is clearly the earliest step toward the Greek decoration. We thus appear to have reached the elements of the Aegean culture in 2500 B. C.

GUROB.—At Gurob the age of the Mykenae geometrical pottery is now completely settled, ranging from 1400–1200 B. C. Beneath the floors of many of the houses were found holes full of personal property, all burnt. Clothing, chairs, necklaces, mirrors, combs, pins, knives, alabaster cups, blue glazed bowls and kohl tubes, and the false-necked vases of Mykenae, are all found together, and the amulets and ornaments are of Tutankhamen and Ramessu II. These burnings are quite un-Egyptian in their nature, and probably are analogous to the Greek funeral pyre, thus maintained after the foreigners here had adopted burial in Egyptian fashion. The next period, the introduction of plant-design, is shown by an Aegean vase with ivy sprigs, found in a tomb at Kahun, which may be dated 1100 B. C.

A remarkable point of history is given on a small altar dedicated to the royal *ka* of Amenhotep III; it appears to be one of a series made by Queen Thii for "her brother, her beloved, the good god Ra-ma-neb." This is the first real evidence as to the parentage of this celebrated queen, and shows that she was a sister-wife, like most of the queens of that age. Iusa and Tuua must therefore be the familiar names of Tahutmes IV and

Mutemua. The name of the Mesopotamian daughter of Dushratta is yet unknown; but she cannot have been the same as Thii. A great number of minor objects have also been found, which illustrate the manufactures of these periods, and are invaluable for dating the styles of the XII, XIX and XXIII dynasties.

These sites are now nearly exhausted; and I have closed my work in Egypt for this year, and I hope to soon begin excavations for the Palestine Exploration Fund on a Canaanite and Israelite town near Gaza.

ALGERIA.

ROMAN TOWNS IN THE SAHARA.—Captain Vaissière presented (Oct. 6) to the *Académie d'Hippone* a topographic map which he had drawn up of the territory of the tribe of the Ouled-Reshaish, indicating the sites of its Roman cities and towns and the Roman roads that connected them. He identifies the *Limes Montensis* of the *Notitia Dignitatum* with the important ruins near *Medila* with the strong rectangular entrenched camp. He also finds at *Djemina* the *Petra Geminiana* of Prokopios.

MECHTA DAMOUS.—ROCK-CUT RELIEF.—M. René Bernelle communicated to the *Académie d'Hippone*, on June 30, 1889, his discovery of a rock-cut composition, near *Mechta Damous* in the douar of the Ouled-Daoud. The immense rock is called *Kef Masioner*. On a smooth surface, about four metres square, is a carved relief. A powerful lion holds under one of his front paws a boar which he has struck down; by the side of the boar a lioness crouches gazing at it; below are two lion-whelps. Further down, on the right, is another lion who seems afraid to approach the first; another lion corresponds to this one, on the left; on either side are jackals. Further to the right, on another space, are a stag and two ostriches, not so well given. On account of these compositions, the rock is supposed to be haunted and is shunned by the natives.—*Acad. d'Hippone: Comptes Rendus*. Bull. 24, 1889, pp. XLVII, LXXII.

TUNISIA.

CARTHAGE.—THE GOD ESHMUN AND THE COCK.—At a meeting of the *Acad. des Inscriptions* (March 27) M. Heuzey read a paper on a Carthaginian god who was represented by Græco-Roman art under the form of Zeus Sarapis or rather of Asklepios with a headdress formed of the body of a cock. After enumerating all the divinities having an animal or a bird for headdress, M. Heuzey sees the origin of the idea in the Egyptian goddess Maut, whose head is covered with a vulture. But the cock as an emblem does not belong to primitive Chaldean or Egyptian art, having apparently been introduced by the Persians in the sixth century. Its earliest representations are upon two neo-Babylonian seals, of about that

date. The cock was then considered as the symbol of the god Nergal, the Assyrian Mars, and, in general, as a bird whose morning-song triumphs over the evil spirits of the night: this double symbolism is found among the Greeks, who connect him with both Ares and Apollon. But he was also consecrated to Asklepios. In M. Heuzey's opinion, the Carthaginian figure is that of the god Eshmun, the Phœnician Asklepios, to whom the principal temple of Carthage was dedicated: this is justified by the intimate connection between medicine and magic in the East.—*Chronique des Arts*, 1890, No. 16.

MACTAR.—M. Philippe Berger communicated, on Jan. 24, to the *Acad. des Inscriptions* a series of neo-Punic inscriptions found at Mactar by MM. Bordier and Delherbe. They are remarkable especially for the symbols they bear, among which are fish and dolphins. With the assistance of M. Cagnat, M. Berger was able to recognize that the names given on these inscriptions were disguised Roman names. The symbols noted were similar to those in use at the time of St. Augustine.—*Chron. des Arts*, 1890, No. 5.

MOROCCO.

EXPLORATIONS BY M. DE LA MARTINIÈRE (cf. vol. v, p. 203).—The explorer communicated to the *Académie des Inscriptions* (March 7, 14) his researches and excavations made, during the past summer, on the site of the ancient city of LIXOS in Tingitana. He brings from this first campaign various documents, such as photographs, plans of the acropolis and of the Phœnician walls, objects collected on the site, the plans and topographic levels of the city, and photographs of its different *enceintes* from antiquity to the Byzantine epoch. Among the objects exhibited were some lamps of hard calcareous stone and of a type hitherto unknown, the head of a statue of archaic character, Phœnician ornaments analogous to the designs on the Carthaginian *stelai*. He also showed a large photograph of the basilica of VOLUBILIS, another ancient city where he collected a great number of Roman inscriptions.—*Revue Critique*, Nos. 11, 12; *Chronique des Arts*, Nos. 11, 12; 1890.

MALTA.

GREEK TOMB-CAVES DISCOVERED AT RABATO OF NOTABILE.—Dr. A. A. CARUANA, Director of Education at Malta, writes as follows: A very interesting cluster of ancient Tomb-caves, extending in a N.W. direction, was, on January 17, discovered at Rabato of Notabile, near the church *Ta-San-Bastian*, on the road *Tal-Virtù* (where new buildings are in course of construction) in the suburb of the old Greek city *Melita*. The site is in proximity to the main gate which stood near *Il-tribuna*, where the Hospital *Saira* is now erected. Both the gate and the ancient lines were

demolished by the Arabs in the ix century, when the extent of the ancient city of Melita was reduced to the present limits of Notabile. This locality appears to have been the burial-ground of the higher and well-to-do classes of the inhabitants of the old city; an opinion corroborated by the discovery of numerous marble, lead and earthenware *sarcophagi*, vases and lamps, glass vessels, polished Greek and Roman pottery, and other objects still generally found in the tomb-caves in that neighborhood.

Under this vast area, numerous pagan *hypogæe* extend in all directions towards *Tal-Virtù*, *San Dumineu* and *St. Agata*; and the early Christian cemeteries and crypts of *San Paolo*, *St. Agata*, *San Catald*, *Sta. Venera* and *Tal-Virtù*, which were excavated in the subterranean Melita.

The present discovery consists of two family-tombs or vaults. When I reached the site, one of the two vaults was already open and the objects found in it had been removed. They have since been bought by the Government, and are in the Notabile Museum. The other vault was apparently still sealed up and intact, and, as the afternoon was somewhat advanced, I offered the tenant some remuneration in order that he might delay the opening of it until next morning and thus enable me to supervise that operation. Unfortunately, during the ensuing night, the ignorant tenant and his wife broke open the tomb and took away its contents, so that, when I reached the place next morning, I found the tomb in a rifled condition, and the floor literally covered with a confused mass of fragments of crenated bones, of broken terracotta vases and glass vessels.

This cluster of tombs, which is excavated entirely in the rock and not much below the surface of the road, is formed of a long horizontal rectangular shaft connecting the tombs lying at its extremities. This shaft is 8 ft. 7 in. long, 2 ft. 6 in. wide, and about 8 ft. 3 in. deep, having at each extremity a rectangular opening 2 ft. wide, and 3 ft. 2 in. high, with a sill rising 4 in. above the bottom of the shaft. Each of these apertures, giving access to the tombs, was sealed up by a stone slab, 2 ft. 6 in. broad, 3 ft. 8 in. high, and 7 in. thick. The shaft represents the *vestibulum*, or ante-chamber, in the ancient tombs, which in those of the Phœnician type had the form and size of a true chamber dug out in the rock, where the corpses were washed and dressed before being laid in the troughs. This *vestibulum* was, later on, superseded, in the early Christian cemeteries, by the *ambulatory*. The two tombs at the extremities of this shaft, which were evidently two family-vaults, are alike in every respect. They are of a rectangular form 8 ft. 4 in. long, 5 ft. 10 in. wide, and 5 ft. 2 in. high, covered with a flat ceiling. A sort of a bench, cut out also from the rock, rising 1 ft. 8 in. above the floor and 2 ft. wide, runs along three sides of each vault. On the bench or shelf of the first-mentioned vault were laid the cinerary urns containing the ashes of ten members of the family. In the other vault

there were twelve urns for as many members of the same family. From the large quantity of fictile and glass vases and vessels of elegant forms, and other objects in brass to be presently described, it may be readily inferred that these tombs were the property of a wealthy and distinguished family.

Nothing in these vaults is to be found displaying the Phœnician characteristic in the shape of the *loculi* or troughs, wherein the corpses were deposited, with a semi-lunar cavity on a raised sill for the head to rest upon, and, at times, also another one for the feet. Moreover, the rectangular shape of these vaults with a flat ceiling differs materially from that of the Phœnician tombs met with in these islands, which are invariably of a round, semicircular or elliptical shape with a vaulted ceiling in keeping with the plan of the tomb. The bench or shelf cut out in the rock and running along three sides of each vault, destined for the cinerary urns which were lying on it, proves that these vaults belonged to a race which practised cremation. Neither could this race have been Roman; for the arrangement of the Roman *columbaria*, like those to be seen in Malta and in Rome, shows small vaulted niches, formed on the four faces of the walls of the sepulchre, each adapted for the reception of a pair of jars (*olla ossuaria*) containing the ashes of the deceased. It is beyond doubt, that the two vaults I am describing belonged to the old Greek race which settled in these islands 700 B. C., and with which cremation was a custom. This is further proved by the numerous terracotta vases, glass vessels and other objects found therein, all of which are decidedly of Greek type and fabric. The Greek elegance and beauty of the vases and other objects hereunder enumerated indicate the epoch of the flourishing artistic state of Melita shortly before and after the beginning of the Christian Era.

The terracotta objects recovered from these vaults are:—22 *stamnoi* (*olla ossuaria*), filled with cremated bones and covered with a lid, besides fragments of others; 2 large *amphoræ*, with an elongated and tapering body, long neck and Rhodian handles attached to it; 4 smaller *amphoræ*; 4 *lagenæ*, one bearing four letters in blackish color, probably the potter's mark; 7 *seriæ*; 5 *diotæ*; 1 *amphulla*; 35 *aryballoi* of different sizes, with one handle; 20 polished red *unguentaria* of a pear shape, with a long neck; 7 *poecula*; 22 *patellæ* of different sizes; 38 *bilychnis*, or two-nozzle lamps; 6 red polished terracotta *monolychnis*, or one-nozzle lamps; 1 *bilychnis* with a *biga* and *Tyche* in relief on top, and the potter's mark on bottom; 1 large *patera* with complete handle.

The objects in glass are:—65 iridescent scent-bottles of the *unguentaria*, *guttus* and *phallavitroboi* kind, of different sizes, all with a narrow and long neck, some with a swelling and rounded body, others with a flat one, others pear-shaped; 1 large one-handled urn, broken, which can be repaired, and fragments of others; 1 *poeculum*; 1 large *amphulla*.

The objects in metal are:—Fragments of a rectangular leaden *sarcophagus*, measuring about 4 feet in length, secured at its four angles by angle brass-plates fixed by brass nails; brass *strigilis*; brass *guttus* (both the *strigilis* and the *guttus* were found in the same vault); broken circular *speculum*, measuring 6½ in. in diameter, of a white very brittle metal made of copper with a good admixture of zinc.

MOSAIC-PAVEMENT AND DAMP-COURSE.—Dr. A. A. Caruana reports the discovery of another mosaic pavement at Notabile, near the Roman Senatorial Palace discovered in 1881. The mosaic, which is of a reddish color spotted with white marble fragments, is of the pattern of the old Roman *pavimenta testacea*. It measures 11 × 18 ft., and doubtless formed the pavement of a Roman *cubiculum*. The discovery is still further very interesting on account of a damp-course underlying the whole pavement, like those mentioned by Vitruvius. This damp-course is formed of a great number of *amphoræ* of Greek fabric, lying imbedded in a mass of red soil. The spaces between the long necks and handles of these jars are filled with broken tiles and terracotta fragments to increase the impermeability of the floor. This is the first discovery in Malta of so-well-arranged a damp-course. The jars and mosaic pavement are being removed to the Museum. Dr. Caruana intends to submit to Government a project for clearing the foundations of the Senatorial Palace, and for preparing a plan of the same, with a view to the erection of a National Museum of the antiquities of Malta.—*Malta Standard*.

ASIA.

JAVA.

M. Hamy called the attention of the *Académie des Inscriptions* (March 7) to the great works recently undertaken for the uncovering of some of the most important ruins of the centre of Java. These monuments of an architecture at once elegant and bizarre, derived from India and dating perhaps from the fifth century A. D., had been but very incompletely studied, being overgrown by a heavy vegetation and in part overthrown by earthquakes. They are now cleared and photographs of them made, which were exhibited. Some of the ruins, especially those called Tchandi, Savi and Tchandi Kali Bening are magnificent. Statues discovered at Tchandi Flaossan are especially remarkable for delicacy of workmanship and beauty of types.—*Chronique des Arts and Revue Critique*, 1890, No. 11.

BURMAH.

ARCHÆOLOGICAL RESEARCHES OF DR. FORCHHAMMER.—According to a correspondent of *Indian Engineering*, Dr. Forchhammer has just completed

two large volumes of his archæological researches in Upper Burmah and the Arracan Division. The chief centre of his surveys was confined to Pagan, the ancient capital of the Tagaung dynasty, situated in the Pokoko district. The survey of the ruins of this ancient city was begun in December, 1888, and, from inscriptions found in the Pegu district, it was proved that remnants of the ancient city will be found on the hills east of Shweyzigon and Ananda Pagodas. From these interesting volumes, we learn that Pagan contains a number of curiously constructed shrines built against the steep sides of ravines, and an interminable labyrinth of artificial caves perforating all the sides of the hills for miles and extending to the banks of the Irrawaddy, apparently constructed for the accommodation of Buddhist monks. Fac-similes of the inscriptions (some on slabs six feet high) have been copied. The inscriptions are engraved in Burmese, Talaing and Pali characters. The dates extend from 1059 A. D., to the close of the last century. Some of the huge granite pillars are traced to have been originally brought from Thaton after the overthrow of the Talaing dynasty. Some clay tablets bearing Nageri inscriptions have also been copied. The walls around the town are said to have been constructed by Indian masons; also a number of Hindu temples which exist in this locality. Most of the structures are built of brick, though many contain stone slabs to ensure stability. The main styles of the buildings are classified as follows: (1) A pyramid, octagonal or circular at base, solid brickwork throughout, no interior, often with lateral flights of stairs to the top. (2) Temples with well-developed interior and central chamber, over which rises a spire. (3) Temples with interior galleries and ante-chambers on four sides with entrances from without, the hall being a massive square. (4) Massive circular bell-shaped structures, similar to shrines in Ceylon. (5) Subterranean monasteries with intricate passages and caves constructed some fifty feet below ground-level. The report concludes with specimen drawings of ornamental carving in stone and wood combined with beautiful variegated tiles. The painting and other decorative art exhibited on these temples disclose an art now lost by the Burmese.—*Amer. Architect*, May 3.

HINDUSTAN.

NEW JAINA INSCRIPTIONS FROM MATHURĀ.—A letter from Dr. A. Führer, dated Mathurā, March 11, 1890, informs me that a liberal grant by the government of the Northwest Provinces has enabled him to resume the excavation of the Śvetāmbara temple under the Kankālī Tilā, and that the results of the working season of 1890 considerably surpass those of 1889. In a little more than two months Dr. Führer obtained a large number of inscriptions, seventeen of which, according to the impressions accompanying his letter, undoubtedly belong to the Indo-Scythic period,

and furnish most important information regarding the history of the Jaina sect. He, moreover, discovered to the east of the S'vetāmbara temple a brick Stūpa, and to the west another large Jaina temple which in his opinion belonged to the Digambara sect. The excavations on these sites yielded 80 images, 120 railing pillars and bars, as well as a considerable number of Toranas and other architectural pieces, all of which are adorned with exquisite sculptures. He was thus enabled to forward to the museum at Lucknow about a ton and a quarter of archaeological specimens. Dr. Führer will, in due time, himself describe his archaeological treasures, and make them known by illustrations. But the inscriptions which he has kindly placed at my disposal are, I think, well worthy of immediate notice. They all belong to the class of short donative inscriptions, found on pillars, images, Toranas, and other sculptures, and closely resemble those discovered at Mathurā in former years by Sir A. Cunningham, Dr. Burgess, Mr. Growse, and Dr. Führer himself. Their dates range between the year 5 of Devaputra Kanishka and the year 86 of the Indo-Scythic era, or assuming the latter to be identical with the Saka era, between 83 and 164 A. D. The name of the second Indo-Scythic king Huvishka occurs twice. It is both times misspelt, being given in the one case as *Huvashka*, and in the other as *Huviksha*. Huvishka's dates are the years 40 and 44. Eleven inscriptions give names of various subdivisions of the Jaina monks mentioned in the Kalpasūtra. The inscriptions mention also distinctly two *sambhogas*, or "district communities," the *S'rika* and the *S'riguha*, or, as perhaps it must be read, *S'rigriha*, which are both known from the inscriptions noticed formerly. In one case there is a mutilated name which looks like *sārīna sambho[ga]*. If we omit the latter, the new inscriptions prove the correctness of the Jaina tradition with respect to the early existence of six divisions of monks, not traced before, and they confirm some of the results obtained in former years.

In addition, they settle another very important question. According to the S'vetāmbara scriptures, women are allowed to become ascetics. But we have hitherto had no proof that this doctrine was really ancient. Dr. Führer's new finds leave no doubt that it was. Most of the Mathurā inscriptions mention in the preamble the name of the donor's spiritual director, at whose request (*nirvartana*) the donation was made. Usually this person is characterized as an ascetic by the titles *ganin* or *vāchaka*, or by the epithet *aryya*, "the venerable." The inscriptions found in former years show in this position invariably male names. Most of the new documents resemble them in this respect. But some mention females—*e. g.*, *Aryya-Saṅgamikā*, "the venerable *Saṅgamikā*;" *Aryya-Sāmā*, "the venerable *Syāmā*;" and *Aryya-Vasulā*, "the venerable *Vasulā*"—as the persons at whose request the images or other sculptures were dedicated. The

position in which these female names* occur, as well as the epithet *aryya*, proves that we have to deal with Jaina nuns who were active in the interest of their faith. This discovery makes it very probable that the Jainas, as the S'vetāmbara tradition asserts, from the first allowed women to enter on the road to salvation, and that the suggestion of some orientalists, according to which the S'vetāmbaras copied the Bauddhas in this practice, must be rejected as erroneous.

A closer examination of Dr. Führer's new inscriptions may possibly reveal other points of interest. But what I have been able to bring forward on a first inspection certainly justifies the assertion that they really are most valuable, and that Dr. Führer has again laid the students of the history of the religions of India under deep obligation.

I may add that, in my opinion, more may be yet expected from the Kankālī Tilā, for the large temples which Dr. Führer has discovered must, I think, have contained longer inscriptions, recording the dates when, and the circumstances under which, they were built. I trust that the government of the Northwest Provinces will enable Dr. Führer to resume his operations next year, and to institute a careful search for these documents. Should the exploration of the Kankālī Tilā, however, be complete, then the Chaubārā mound ought to be attacked, because it undoubtedly hides the ruins of an ancient Vaishnava temple, and will yield documents elucidating the history of the hitherto much underrated Bhāgavatas—a sect which is older than the Bauddhas, and even than the Jainas. —G. BÜHLER, in *Academy*, April 19.

GUPTA SEAL-INSRIPTION.—In a late number of the *Journal* of the Bengal Asiatic Society, Mr. Vincent Smith and Dr. Hoernle describe an ancient seal found at Bithari, in Ghazipur district of the Northwestern Provinces, well known for its stone pillar with an inscription of Skanda Gupta. This seal bears on the upper part, in relief, a representation of Garuda, the human-faced bird-monster which was the emblem of the Gupta dynasty. Below is an inscription giving the genealogy of the Gupta kings (with their queens) for nine generations, ending with Kumāra Gupta II, the owner of the seal. Hitherto, only seven Gupta kings were known, from coins and inscriptions; but the dynasty is now carried down to about A. D. 550.—*Academy*, March 22.

VINUKONDA (Madras).—*Roman Aurei.*—In the last part of the *Numerismatic Chronicle* for last year, Mr. E. Thurston describes fifteen Roman aurei lately discovered at Vinukonda, in Madras. They date from Tiberius to Caracalla; and, as with previous finds, they are in good preservation.—*Academy*, March 22.

AFGHANISTAN.

LANGUAGE OF THE AFGHANS.—PROFESSOR JAMES DARMESTER, in his recently published work (through the *Société Asiatique*) on the Popular Songs of the Afghans, reaches the conclusion, that Pushtu (the language of the Afghans) is not—as has been commonly thought—intermediate between India and Persia, but purely and exclusively Iranian, being derived from the Zend of Arachosia. As regards history, M. Darmesteter traces the origin of the Afghans back to the time of Alexander; and he also describes the organization of their schools of popular poetry.

PERSIAN INSCRIPTION AT KANDAHAR.—M. DARMESTER has also read a paper (Feb. 27.) before the *Académie des Inscriptions* upon the great Persian inscription at Kandahar, so often mentioned by travellers but never before copied. M. Darmesteter obtained his copy of it, through Lieut. William Archer, from the native letter-writer to the Indian Government at Kandahar. The inscription is in two parts. The first part is dated 1522 A. D., having been engraved by the Emperor Baber to commemorate his capture of the city on his way to the invasion of India. The second part, which was written in 1598, contains a history of the city from the time of Baber to that of Akbar, and also a list of the provinces and chief towns of the Mughal empire.—*Academy*, March 22; *Revue Critique*, 1890, p. 200.

GRÆCO-INDIAN STATUES.—At a meeting (Feb. 21) of the *Académie des Inscriptions*, M. Senart exhibited reproductions of some Græco-Indian statues discovered by Capt. Deane in the course of excavations at Sikri, in the valley of the Kabul river. One of them represents an absolutely new type of Buddha, emaciated by the austerities to which he subjected himself before attaining perfect knowledge. M. Senart also referred to an inscription published in the *Indian Antiquary* of September, 1889, which was found on a sculptured fragment of Græco-Indian style. Owing to the inadequacy of the fac-simile, he was unable to regard the date as certain. M. Senart proceeded to make some general remarks upon the influence which classical art exercised upon India. In his opinion, Mr. James Fergusson has brought too low the date of many of the Græco-Indian monuments in the northwest of India. M. Senart maintained that the chief intermediary was the Hellenism of the Arsacides; and that the period when Western influence upon Indian art was most marked was the first and second century A. D., during the reign of Kanishka (Kanerkes) and his successors.—*Academy*, March 22; cf. *Revue Critique*, 1890, p. 179.

PARTHIA.

UNIQUE PARTHIAN TETRADRACHM.—At the Dec. 19 meeting of the Numismatic Society (London), Dr. B. V. Head exhibited, on behalf of Mr. W. H. Penney, a new and unpublished tetradrachm of one of the early

kings of Parthia; *obv.* bust of king to left, wearing royal diadem, the string of which forms a large loop behind the head, and a winged tiara somewhat resembling those worn by some of the later Sassanian kings; *rev.* ΒΑΣΙΛΕΥΣ ΑΡΣΑΚΟΥ, Nikē standing to the right, holding a palm in her extended right hand, and a sceptre terminating in a star over her left shoulder. In field r. a monogram composed of the letters ΑΤΤ (?); weight 245 grs. Dr. Head remarked concerning this curious and unique coin that the king's portrait bore strong resemblance to that on the drachms of Phraohapates I (Arsaces IV), 196-181 B. C., but that the head-dress and the reverse type were entirely new to the Parthian series. From the simplicity of the title, as compared with the pompous inscriptions on all but the very earliest Parthian coins, he drew the inference that it was minted in some Greek city, the name of which was concealed in the monogram. Prof. Gardner concurred in the main with Dr. Head, though he was inclined to attribute the coin to a rather later date, probably to the reign of Mithridates I, 174-136 B. C.—*Athenæum*, Jan. 4.

BABYLONIA.

THE AMERICAN EXPEDITION.—The Americans excavating at NIFFER (the ancient NIPPUR) have laid bare the temple of Bell and have found inscribed tablets which date back to 3750 B. C. They have discovered at UR, in the great temple-library, many inscribed tablets, cylinders, and bricks of first-rate religious and historic importance.—N. Y. *Evening Post*, in *Amer. Architect*, March 9.

SYRIA.

M. G. MARMIER, Commandant of Engineers, made a communication to the *Académie des Inscriptions* (Jan. 10) on the ancient geography of Syria. This work bears on three principal points: (1) The situation of the country of ARAM-NAHARAÏM of *Genesis*, the residence of Abraham: M. Marmier rejects the opinion which identifies this country with Mesopotamia, and looks for the site in the north of the land of Canaan. (2) The situation of the city of KEDESH, celebrated in the Egyptian annals of the XVIII and XIX dynasties: it is, says M. Marmier, the *Kadytis* of Herodotus; it was situated at the foot of Carmel and not far from the city of Arados, mentioned in the *Periploës* of Skylax. (3) The situation of the country of NEHARINA: M. Marmier, in accordance with Egyptian texts, recognizes it as identical with Aram-Naharaim. M. Marmier added, that these geographic deductions may throw some light on the history of the Khetas, in getting rid of the legend of a pretended invasion of Middle Syria, by this people, between the reigns of Thothmes IV and Rameses II.—*Revue Critique*, 1890, p. 60.

THE ARABIC LIBRARY AT DAMASCUS.—A Greek judge in Cyprus, M. Chri. Papadopoulos, has printed, as the forerunner of a treatise by him on the Arabic Library at Damascus and its mss. that has long lain unpublished, an interesting short account of them in a Greek theological magazine called *Σωτήρις*. From it are extracted the following passages:

The library was founded by the Ommayyads. The building is situated near the stately Djami which bears their name. It has a great stone vault supported upon four columns, and is ornamented with mosaics. There is no proper catalogue of this library, nor is it arranged. Several of the manuscripts are moth-eaten and much injured by damp. Still, there exist in it valuable papyri as well as manuscripts on parchment and paper. Among them, according to M. Papadopoulos, a conspicuous place is due to a history of Damascus in nineteen large volumes. A great deal that is new is to be found in them regarding the city and its walls as well as the fine arts in Damascus. This codex is a jewel of Arabic literature and an inexhaustible source for the whole annals of the city.

The collection of old Arabic papyri is rich. There are several that throw light on obscure periods of Arabic history and poetry, or deal with the general history of Arabs and their literature. Some of these papyri are as late as the fifteenth century, and may be considered, says M. Papadopoulos, as copies of monuments in stone. On papyrus rolls are to be found collections of poems by celebrated Arab authors, of whom Ibn Khaldoun is the most notable; others contain decrees of the Emirs of Damascus.

M. Papadopoulos mentions also a history on parchment of the Tartars by Abulghazi Bahadur, and a history and geography of Damascus and Palmyra by Abulfeda. Although M. Papadopoulos gives no details regarding these writings, one can identify the history of Abulghazi as that which was discovered by Swedish officers in captivity after the battle of Pultowa, 1709, and translated into German, and subsequently (1726) into French, and published in two volumes under the title of *Histoire généalogique des Tartars*. Regarding the work of Abulfeda one cannot, from the brief notice that M. Papadopoulos supplies, come to any certain conclusion, whether it be a portion of the *Annales Moslemici* or an unpublished production of the celebrated Mohammedan prince and polyhistor.

Among the other treasures of the library are a treatise of Abul-Hassan, the Arabian astronomer of the thirteenth century; a roll of Abumazar, the astronomer (circa 855), on the observatories at Bagdad and Damascus; a medical treatise of the teacher of Avicenna, Abu-Sahaal; a meteorological bulletin relating to Damascus by Abul-Chaiz; papyrus rolls containing the Pentateuch, the Psalter, and the Gospels in Kufic characters; papyrus rolls and others, consisting of Plato's "Laws" in Arabic, the "Organon" of Aristotle, the work of Hippocrates "De Aëre, Aquis, et

Locis," and one containing some portions of the "Birds" of Aristophanes (in Arabic?), with variants, and the Bible in Syriac.

But the great prize of the library, so far as one can judge from the inadequate description given of it, is a Greek manuscript of the Old and New Testament, comprising the *Epistle of Barnabas* and a portion of the *Shepherd of Hermas*. As the discovery of it is highly interesting, I give an exact translation of the passage referring to it: "One of the most important of the so-called uncial manuscripts which contain the whole of the New Testament complete is as follows:—

"The manuscript is written on well-prepared parchment and is 12½ inches wide and 13½ inches high. It consists of 380½ leaves, of which 200 contain the Old Testament (in the Septuagint version) incomplete; but 180, the whole of the New Testament, the *Epistle of Barnabas*, and a large portion of the *Shepherd of Hermas*. The manuscript is divided into four columns, and in each column there are fifty lines. This ms. may be regarded as similar to the *Codex Sinaiticus*, and consequently is worthy of a searching inquiry and investigation. The discovery of this gem is due to us."

Every reader will see that it is really a gem. Not only is the mere antiquity of the manuscript a point of importance, but also the fact that it contains a portion, and a considerable portion, of the *Shepherd of Hermas*, which has lately been seen in a new light, thanks to the researches and criticisms of scholars like Hilgenfeld and Harnack. It is well known that Hilgenfeld maintained that he had found the Greek conclusion, still missing, of *Hermas*, in a London publication of the well-known forger Constantin Simonides (Nutt, 1859). This supposed conclusion—after the appearance, simultaneously with Prof. Hilgenfeld's conjecture, of the collation of the Athos Codex by Lambros accompanied by an introduction by Mr. Armitage Robinson—was utterly rejected by Prof. Harnack and declared to be a pure forgery of Simonides, an opinion in which I concur. Now comes the ancient ms. from Damascus as a new document. Does it contain the conclusion of the *Shepherd*? Unfortunately the meagre notice supplied by M. Papadopoulos neither throws light on this point nor affords us sufficient information, nor does it allow us to form any certain opinion on the whole question of the importance of the Damascene Codex and its similarity to the Sinaitic, which also contains, besides the Testament, a small portion of the *Shepherd*. I hope, however to be soon in a position to give further intelligence on this important discovery.—SPYR. P. LAMBROS, in *Athenæum*, Feb. 1.

PALESTINE.

PALESTINE EXPLORATION FUND.—The committee announce that they have obtained a firman granting permission to excavate at KHORBET 'AJLÂN, the EGLON of *Joshua*. It is understood that all objects, except duplicates, found

in the course of the excavations shall be forwarded to the Museum of Constantinople, but that the committee's agents shall have the right to make squeezes, sketches, models, photographs, and copies of all such objects. The committee have secured the services of Mr. Flinders Petrie, who is now in Palestine making arrangements to start the excavations.—*Pal. Explor. Fund*, April, 1890.

CÆSAREA.—Mr. Schick reports the discovery of an obelisk, here, and sends a drawing of it. It is believed that this is the first obelisk discovered in the Holy Land.

GALILEE.—Mr. Schumacher reports the discovery of a large cave at NAZERETH; ancient and elaborate rock-tombs at HAIFA and SHEFA 'AMR; exploration of the caves of JESSÂS; the discovery of various inscriptions, and of the rock-hewn apse of a church.

JERUSALEM.—*Pool of Bethesda* (see *JOURNAL*, vol. IV, pp. 482-3).—The clearance of the Pool has been continued, and Mr. Schick reports details and gives section-plans. It is now quite clear that the original church stood immediately over the Pool, i. e., the top of the Pool formed the floor of the church, and that the five small chambers or porches over the Pool (which are connected by an open arch) did not belong to the original structure but were afterwards introduced, perhaps by the Crusaders. On the wall of the church has been discovered a fresco representing an angel troubling the waters; and in other parts of the church are visible small pieces of fresco, indicating that the walls of the ancient church were covered with fresco-paintings.

Ancient City-wall.—Further portions of the ancient wall of Jerusalem have been exposed on the northern side and at the northwestern corner.

Discovery of a large Cistern.—A very large cistern has been discovered near the Church of the Holy Sepulchre, apparently under the spot where stood the mediæval church of Sta. Maria Latina.

Rock-levels in Jerusalem.—Mr. Schick communicates further observations on the rock-levels of the city, confirming the supposition, that east of the Church of the Holy Sepulchre there is a rock-terrace nearly surrounded by scarps of considerable height.—*PEF*, January, 1890.

Mount of Olives.—Very interesting discoveries have been made—including a Christian burial-place, an extensive series of catacombs, which had been used by Roman soldiers of the tenth legion, a number of Roman tiles, and other antiquities of various periods. In the course of the excavations for building, the workmen came across the remains of a group of tombs. Several shafts and capitals of columns, ornamented with acanthus leaves, in the Roman-Greek manner, were dug up, and the plinths on which they rested were found. Between the plinths was a mosaic pavement, containing a Greek inscription in black on a white ground; and under the mosaic

were found stone slabs, which formed the covers of the tombs. So far, fifteen of these tombs have been opened. They appear to have been made partly by Jews and partly by Christians, those attributed to the latter being situated in a group a little apart from the others.—*PEF*, Jan.; *Amer. Architect*.

Excavations on the eastern brow of "Zion."—About last July, excavations were commenced on a piece of ground on the eastern slope of the western hill of Jerusalem (generally called Zion) about half-way down between the buildings of Neby Dâûd and the Pool of Siloam. The property had been bought by a Frenchman, Count Piello, and the work was overseen by a Roman Catholic monk. Mr. Schick was allowed to make plans (which are published) and to see the discoveries, such as "masonry, rockcarps, well-mouths, and many hewn and sculptured stones; also pavements, mosaics, etc." It is found that *there were in ancient times caves and dwellings excavated in the rock*, which excavations were in later times converted into cisterns. Here are, nearly throughout, two stories of excavations; the upper ones certainly were originally used for human dwellings, or as cellars, magazines, stables, etc." On a terrace (12 ft. high) were found a large piece of mosaic pavement and three bases of columns, the largest one *in situ*.—*PEF*, January, 1890.

DISCOVERIES NORTH OF DAMASCUS GATE.—Basilica of St. Stephen and rock-cut Tombs.—Mr. Schick reports, on his examination of the Dominican property northwest of "Jeremiah's Grotto," that he has discovered indications of a second church (older and larger than that previously known)—a basilica with wide nave and narrow side-aisles, thought to be the original church of St. Stephen. There are mosaic pavements in the eastern part of the two aisles of the church. Under the church were found two rock-cut tombs, similar to those discovered several years ago. Access to these tombs was by steps leading down from beneath the pavement of the church. The entrance to the first tomb was below a very large flagstone, on which was a Greek inscription. Over the stone entrance-door of this tomb was a second Greek inscription cut in the rock. This tomb was approached by a passage on the right and left of which are *loculi* (containing bones and mould), each *loculus* covered with three slabs on one of which is an inscription. A little to the west of this tomb was found a similar one, but without any inscription; and, instead of a door, it had a round stone to be rolled before the opening. It was like that at the Tombs of the Kings, only thinner and smaller. Mr. Schick gives section and ground plans of the tombs, and fac-similes of the Greek inscriptions.

Two rock-cut Cisterns near "Jeremiah's Grotto,"—Mr. Schick examined and describes these cisterns and gives plans of the larger one, which has

circular ends and is covered with a pavement of large flagstones. It measures 66 × 30 feet, and is 45 feet deep. The rock-cut sides converge, and the roof is constructed of hewn stones in the form of a very pointed vault. Mr. S. says: "This remarkable cistern is certainly not of Mohammedan or Christian origin, but apparently Canaanite, its form being like so many made by Canaanites in the rock, but I have never before seen one so large. The arching, and the slab with two iron rings [in the pavement], is very like Crusading [work]."

Cistern No. 2 is about 24 feet square and 15 feet high. It is entirely hewn in the rock, "and before it was made into a cistern was rock-cut Jewish tombs. This cistern proves that there were rock-cut tombs between the present town-wall and the scarp of Jeremiah's Grotto on the north, as in the Jeremiah-Grotto hill itself."—*PEF*, Jan., April, 1890.

SARIS.—In a cave, here, have been found human figures sculptured on the walls, resembling the "proto-Phœnician" rock-sculptures near Tyre; and an inscription, believed by Professor Sayce to be evidently old-Phœnician. An inscription which had escaped the observation of previous travellers has been noted by Mr. Hanauer at Beit el-Khalil.—*PEF*, January, April, 1890.

SILWÂN.—*Rock-hewn Chapels.*—Mr. C. Schick reports the discovery, beneath the village of Silwân, of four rock-cut chapels, of which he gives the external view, ground-plan, and section. Two of these could not be examined, the other two were examined and measured: they contain two chambers, and terminate in an eastern apse; the semidome being made like a Mohammedan *mihrab*. In one of the apses, just below the semidome, was found a Greek inscription in two lines, of which Mr. S. gives a fac-simile. It appears that these rock-cut chambers were once used by Christians as chapels.—*PEF*, January, 1890.

PHŒNICIA.

ACH-ZIB.—**PHŒNICIAN NECROPOLIS.**—EDMOND DURIGHELLO writes to the *Courier de l'Art* (of Jan. 31, 1890) concerning his archaeological researches in Galilee: "I made my first stop at El-Zib (ancient Ach-Zib), which is a rather important village, three hours from Saint-Jean-d'Acre. I passed two days there in studying the ancient burial-places upon which are built the houses of the present village. These burial vaults are constructed of beautiful freestone, of calcareous *breccia* cut with the greatest care and skill. I chose a spot which seemed to me the most promising, and came at once upon a quadrangular well, cut in the living rock and conducting to a tomb hermetically sealed with a single block of stone. The form of the tomb was that adopted by the Phœnicians after the first conquest

of Phœnicia by the kings of Egypt, and it had not been opened since the Phœnician period. On removing the monolith which closed the vault, I found in the interior three tombs of masonry, one in the bottom and the two others against the lateral walls of the vault. These tombs were constructed of sandstone and lined inside with slabs in the form of a cover, sustained by projecting masonry. Toward the head of each skeleton were placed three or four terracotta statuettes, Egypto-Phœnician, like those discovered at Cyprus, and of which I have only seen rare specimens elsewhere. Toward the middle of the body began a row of vases and dishes of terracotta of all forms and sizes. But, without counting the jewels, amulets, and scarabs, what appeared to me to be of great archaeological value were the terracotta groups of personages, of very primitive workmanship, representing, in my opinion, handicrafts; it would appear that there still existed among the Zibiotés of that period the habit of interring, with their dead, figurines recalling the habits and craft of each one. During more than two months I followed up my excavations upon this vast site, but with frequent interruptions, owing to the interference of the authorities. Nevertheless, I succeeded in clearing out more than a hundred of these intact vaults, and in making an extremely interesting collection of these trade-groups, of which, so far as I know, there is nothing analogous in any Museum. I did not attack the richest part of this necropolis, which I reserved to excavate under better conditions."

SAÏDA.—"On my return to Saïda, I found that admirable necropolis from which were taken those magnificent sarcophagi which the Museum of Constantinople removed from Saïda three years ago, to have been annihilated! For the rock in which were these beautiful sepulchral vaults worthy of the archæologic marvels which they contained, the entire rock, had been brutally torn up and transformed into stupid masonry! And there, where reposed the ashes of King Tabnit, there is only an empty pit. That grandiose subterranean Museum, which earthquakes and the devastations of conquerors and centuries of barbarism had respected, has been effaced by the criminal stupidity of a miserable gardener of Saïda."

ASIA MINOR.

AIGIAI (mod. Nimrûd-Kalessi).—EXCAVATIONS BY THE GERMAN ARCHÆOLOGICAL INSTITUTE.—The recent excavations conducted here by Drs. Bohn and Shuchardt (the excavators of Pergamon) are discussed by them with minute detail and numerous illustrations in the second *Ergänzungsheft* of the *Jahrbuch d. k. deut. archæol. Instituts*. The excavations revealed three temples, a theatre, a stadion, several large stoai, a covered market-place, well-preserved city-walls, and numerous inscriptions.

EPHESOS.—MR. WOOD'S UNPUBLISHED DRAWINGS AND DOCUMENTS OF THE TEMPLE OF ARTEMIS.—Mr. George Aitchison, Professor of Architecture at the Royal Academy of Arts, writes to the *London Times*, under date of April 19, on the occasion of the death of Mr. J. T. Wood, the discoverer and excavator of the Temple of Artemis at Ephesos: "It is not generally known that the drawings and memoranda necessary for a trustworthy restoration of the temple have never been published, and, without them, no proper comprehension of the facts can be arrived at. The book which Mr. Wood published in 1877 was only a popular account, and he intended publishing a larger and more complete work on the subject, but did not live to execute it. These drawings and documents, in Mr. Wood's possession at his death, will run the chances of loss or destruction unless they are at once arranged and digested by a scholar, a classical antiquarian."

REMAINS OF THE ARCHAIC TEMPLE OF ARTEMIS.—Mr. A. S. Murray, contributes to the October number of the *Journal of Hellenic Studies* a paper in which he illustrates some fragments of the archaic temple at Ephesos found by Mr. Wood built into the construction of the later temple. Mr. Murray has put most of them together again in such a way as to show that they belong to the cornice of the old temple and that in this cornice the spaces between the lion-heads used as water-spouts are occupied not by floral ornaments, as in the usual temple, but by groups of figures sculptured with extraordinary minuteness and delicacy. Hardly any two of the fragments fit together: there is here a foot or hand, there a head or piece of drapery. These sculptures either formed a continuous subject, separated into groups by the lion-heads, or a series of separate subjects, in the manner of metopes. The period assigned to the work is c. 550 B. C.

Other fragments are used to reproduce the capital, shaft, and base of both an ordinary column and of a sculptured column or *columna coelata*. The figure used to demonstrate the existence of *columnae coelatae* in the old temple is one that is said by Mr. Murray to answer fairly to a Hermes on an archaic vase from Corinth in the British Museum. The figure stands on a flat band, which begins the base; then comes a torus-moulding and the rest, in a style that was imitated in the new temple. "The sculpture of the archaic columns, so far as I can judge, is of the same period as the cornice. The forms are of course larger and more simply treated. But the workmanship is of the same delicate archaic kind. On the column the remains of color are slighter than on the cornice, where in some parts they are quite brilliant in reds and blues."

We know, from Herodotos, that Kroisos bore the expense of most of the columns of the early temple, and a fragmentary inscription on these fragments is restored: Βα[σιλεὺς] Κρο[ίσος] ἀν[έθηκεν]. The architect of the old temple was Chersiphron. It is suggested that the sculptor was Bupalos,

son of Archemos who worked in Asia Minor. The date of all these fragments and of the old temple appears, therefore, to be that of Kroisos. [The capital, however, as restored, appears not to belong to so early a date, but to be not earlier than the fifth century.—ED.]

HISSARLIK.—Dr. SCHLIEMANN has not, as was reported, left the Troad, but still remains there, and he has just obtained from the Sultan a new firman, allowing him to make fresh excavations at Hissarlik. His attention is now directed, it is thought, to a thorough exploration of the lowest strata, occupied by the earliest inhabitants of the supposed site of Troy.

Dr. DÖRPFELD, finding he could not undertake any excavations at Idalion, in Kypros, for the German Government, has gone to join Dr. Schliemann at Hissarlik, where operations have commenced outside the walls of the burnt city. They will continue their excavations there for two years, as they intend to bring to light the greater part, if not the whole, of the ancient city. The present campaign will last till the end of June and will be resumed in the autumn.—*Athenæum*, March 8, 22, May 10.

KILIKIA.—IDENTIFICATION OF ANCIENT SITES.—“Whilst wandering about in the district known formerly as Kilikia Tracheiotis, I have been able to identify several important sites. On the high land which rises above the sea between Mersina and Selefkeh (Seleucia) are the remains of several Greek cities. One of these was **OLBA**, which Strabo tells us was ruled over by priest-kings, most of them bearing the name of Teukros or Aias. On a polygonal fortress I found one inscription, a dedication to the Olbian Zeus by the priest Teukros Tarkyrios, and another stating that the building was erected under the superintendence of Pleistarchos of Olba; thus the site of this ancient city is clearly established. A large tomb built on the slope of the hill contains an inscription with the name of Aba, a woman, Strabo tells us, who married into the ruling family, and was recognized by Antony and Cleopatra as the ruler of this part of Cilicia. From the site of another town, called in an inscription **EABBATIA**, we learned the names of two other priest-kings, namely, Hermokrates and Lucius. This town contained two temples of Hermes—one was in a deep gorge where three caves are walled in with polygonal masonry, and before it once stood a handsome propylæon erected at the expense of two noble ladies, who are depicted on the pediment with their spindles. The other temple of Hermes was in the town itself, and yielded several interesting inscriptions.

“With regard to the question of the Corycian cave, I am inclined to believe that explorers have not yet identified the situation. Strabo tells us that it was twenty stadia behind Corycus. Now Olba is about that distance, and in the centre of the ruins of Olba, just beneath the above-mentioned fortress, is exactly such a hole as Strabo describes. It is about three-quarters of a mile round and two hundred feet deep, with precipi-

tous cliffs around it, in which are carved several funereal bas-reliefs; it was approached by two roads—one a tunnel cut in the rock, descending from the spot where presumably the temple of the Olbian Zeus stood, and the other an open staircase cut in the rock.

"These towns on the hill-slopes are mostly built on precipitous rocks, and are protected by fortresses of polygonal masonry. Most of them have distinguishing marks on the outer stones; that of Olba has a triskele, Eabbatia has a hunting horn, and another fortress town, the name of which I was unable to identify, has a club for its symbol."—J. THEODORE BEST, in *Athenæum*, April 5. Cf. *Classical Review*, 1890, pp. 185–86, where Cecil Smith questions the identification of Olba.

KORAZA.—TEMPLES.—M. Paul Foucart, in the *Bull. de corr. hellén.*, has identified certain ruins which he visited between Stratonikeia and Mylasa with Koraza, a deme of Stratonikeia. An inscription found there decrees certain recompenses to benefactors to be inscribed on the *antæ* of the temple of Artemis. There are here the ruins of a number of sanctuaries. From the analogy of inscriptions at the neighboring Lagina and Panamara and especially in the sanctuary of the Karian Zeus, M. Foucart sees, in these ruins, those of the sanctuary of Artemis *Κοράζιον* and the temples of Apollon and Latona, and, in the site, that of the deme of Koraza.

KYZIKOS.—TEMPLE OF HADRIAN.—M. THÉODORE REINACH communicated to the *Académie des Inscriptions* (March 14, 23) a study on this colossal work of Græco-Roman art, esteemed by some ancient writers one of the seven wonders of the world. The edifice was destroyed by earthquake as late as 1063 and is now entirely in ruins, but, in the xv century, Cyriacus of Ancona saw a part of it standing, and took exact measurements. His notes, discovered by Comm. J. B. de Rossi, and communicated to M. Reinach by M. Georges Perrot, have furnished all the material needed for the restoration of the ground-plan and of the elevation of the monument. The columns, sixty-two in number, were monoliths 21 metres high, the largest known to exist. The pediment was ornamented with a series of statues and a colossal bust of Hadrian. Cyriacus himself copied an inscription which mentions the hitherto unknown name of the architect, *Aristenethes*. M. Reinach has interpreted the indications given by Cyriacus, and restored the text of the inscription in Greek verses, of which he gives the following translation: "He who, at the expense of all Asia, caused me to rise from the ground with the help of much labor, is the divine Aristenethes." We have, here, another confirmation of the fact, that the temples dedicated to the Emperors were raised, for the most part, on the initiative and at the expense of the provinces.—*Revue Critique and Chronique des Arts*, 1890, Nos. 12, 13.

KYPROS.

GOLGOI.—On his return from Lokroi in S. Italy, Dr. Dörpfeld stopped in Kypros to take charge of the excavations undertaken by the German Archaeological Institute on the site of Golgoi.—*Chronique des Arts*, 1890, No. 6.

LEUKOSIA.—Near Leukosia, at the foot of the mound of the Prodromos where formerly stood the ancient temple of Apollo, Herr Richter has found several tombs, in two of which were discovered some statuettes and other objects, some being of gold. A colossal stone lion was discovered at the same time.—*Athenæum*, Jan. 25.

SALAMIS.—EXCAVATIONS BY THE CYPRUS EXPLORATION FUND.—J. A. R. Munro writes, Feb. 1, 1890: "Work was begun January 16 at the famous granite columns noticed by almost all writers since Pococke. Intersecting trenches were run across the site from north to south and east to west. After about a yard of fairly easy soil the excavation became very slow, and resembled hacking through bricks and mortar: 5 or 6 ft. lower the earth was again looser and less mixed with rubble, until the virgin soil was reached at a depth of 10½ to 13½ ft. in the centre of the site. Numerous ancient remains were encountered almost from the surface downwards. They were chiefly flimsily built walls, though partly constructed of large squared blocks, with frequent water-channels and pipes running here and there. Miserable graves were met with in abundance from about 2 to 5 ft. down. To the east, bordering on the north trench, was found a nest of large blocks, which seemed to represent the foundation of a small octagonal building surrounded by a water-course. Among the blocks were fragments of plain white marble columns and pieces of cornice, etc., of very poor late style. In the western trench, at about 6 to 8 ft., lay a number of fragments of fluted limestone columns with stucco coating, a capital and base, and other pieces, dating, perhaps, from the Ptolemaic period. Under them is what looks like a solid wall, but further investigation is here necessary. At the extreme south, a well-built wall, with topmost course of very large blocks, has been followed down to the virgin soil, and there is possibly a corresponding wall at the north end. We have probably here to recognize the wall which supported the great granite columns. The antiquities found are of little interest, and include nothing that need be dated further back than Hellenistic times. Nearest the bottom were a certain number of potsherds of a familiar Cypriote style. On the whole, this site may be condemned as scarcely likely to repay the immense labor of excavating it. Whatever earlier buildings there may have been seem to have been turned upside down by later operations.

Second Site.—"Meanwhile, another site had been started in the sand-hills at the extreme northeast of the ancient city, close by the forest-guard's

house. A couple of Corinthian capitals had been turned out here some years ago in the search for water, and the spot seemed to offer opportunity of testing the quality of the contents of the sand-hills. We have now laid bare the greater part of a wall, probably of a temple, running northeast and southwest. Upon it are a number of marble bases of various diameters set at different levels, and by them lie plain marble shafts and Corinthian capitals, just as they fell. The shafts vary in dimensions no less than the bases, and we have no doubt to recognize a late building constructed of materials from several earlier temples. But, at each end of the wall and underneath one or two of the marble bases, are others of superior workmanship in limestone, which Dr. Dörpfeld, who saw them this morning, has pronounced to be probably of the fifth or fourth century. Working in sand is difficult, and little can be done until our wheelbarrows arrive, but we now know roughly the position and dimensions of the building. In a trench to the southeast, a new set of columns have appeared, of large diameter with late fluting: they seem to have fallen from another building occupying the site where the house now stands. A small marble torso of Eros, with remains of wings on the back, and a small figure of a river-god, also of marble, are the principal objects so far found on this site. The promise of the place lies largely in the fact that all seems to remain *in situ*, but little injured or disturbed.

Third Site.—"Two days ago, we started on a third site, a long depression extending some two hundred yards southwards from the late building known as the *Λοιρῶν*. This is a site which no explorer of Salamis can afford to overlook. It is very large, occupies a central position, and was apparently flanked by huge colonnades with great limestone columns, the drums and capitals of which lie in series along the sides. At the south end rises a hillock, which may have borne a small temple. Fragments of blue "inscription stone" are very plentiful, and we no sooner began to turn them over than we found five pieces with letters. One of these is an interesting and perhaps important Latin inscription:

...J]uli nepoti Aug. [ilio
 ...tribunic]is potestatis...
 ...Sala]minorum [senatus
 ...ponen]dam curavit Ide[usque...
 ...C. Lucretio Rufo...

"So far our results on this site are as follows. The interval between the colonnades is paved with stone blocks, and within each is a mosaic pavement. Behind the western colonnade has been found a small square foundation of late date, with water-channel around, formed largely of marble blocks and bases of statues. One of the blocks bears an inscription

of Ptolemaic date. On the slope of the hillock are several marble blocks, which might be taken for steps, but are possibly remains of walls. Near the foot of the rise, close to the surface, lay an enormous marble capital, extraordinary in its decoration no less than its size. It measures roughly 3 ft. in diameter at the base and 4½ ft. at the top. From one side projects a colossal bull-head and neck, with wings springing from the shoulders and forming, as it were, volutes. On the other is a Caryatid, on a very much smaller scale, passing at the waist into a floral ornament. The remaining sides are broken away, but no doubt repeated these. The bull-head and wings are of strong, effective style, while the other side is rather decorative than forcible. There can be little doubt that this site was an important centre of civic life."—J. A. R. MUNRO, *Athenæum*, Feb. 22.

H. A. TUBBS writes, Feb. 15, 1890: "Since our last report the excavations here have progressed favorably. Practically our efforts have been confined this fortnight to our *third site*, that close to the most conspicuous ruin of Salamis, the building known to the villagers as the *Αουρπών*. The site is a long depression, 750 ft. by 205 ft., and is terminated at the northern end by the Loutron, at the southern by a hillock which, as our excavations seem to show, is composed almost entirely of loose earth and *débris*, and represents but a slight natural rise in the ground. This depression is occupied by a double colonnade of large limestone columns marking out a parallelogram, so far as we have yet excavated, of 680 ft. by 110 ft. The columns are plain, of Roman work, probably about the time of Hadrian, with a pedestal of 3 ft. 6 in. upper diameter, and a capital 2 ft. 4 in. high, 4 ft. 9 in. in diameter, and 6 ft. 9 in. in diagonal measurement. The style is Roman Corinthian, the device *folia* relieved by bunches of grapes, and with high volutes at the corner. The height of the columns we have not as yet been able to determine, but their base diameter is 3 ft. Beyond the row of columns there was probably an outer wall, forming a closed colonnade. This wall is as yet not determined. On either side of the columns there would seem to have been a tessellated marble pavement, several sections of which we have already opened. The mosaics referred to in our last report—and we have now found a third—were probably later additions when the colonnade wall began to be used by later builders as a foundation for private houses and similar erections. The eastern colonnade wall has been laid open for almost its entire length, the western for half that distance. Many bases and *podia* have been found, and the intercolumniation is fairly fixed at 16 ft. The southeast, northeast, and northwest angles are also, in all probability, ascertained; but the southwest presents a difficulty, as the colonnade seems here to continue beyond its natural limit. This, with many other problems, remains to be solved by further excavation. At

the north end there may have been a front of a double row of columns; all indications so far point that way. The question remains what was this site, which above ground is at once the largest and the finest in Salamis. We have found portions of an inscription which seems to throw a much-needed light on the point. This inscription—and there is a second of the same character—is not graven in the stone, but was formed of huge bronze letters (no longer, of course, remaining) soldered on to large marble blocks. From the traces still left, in the shape of socket-holes and shallow grooves, the word *FORUM* may, almost with certainty, be read, together with probably the title *PRORHATOR* of the restorer of this fine site, which was therefore, at least in Roman times, the Agora of Salamis. A most interesting point arising out of our work on the Agora site is that of the intention of the large building of late Roman times already referred to, the so-called *Loutron*. We have opened now three large subterranean water-channels, which may render possible the settlement of the vexed question, how far the *Loutron* deserves its name.

"As regards our two other sites previously mentioned, the first may now be considered as definitely abandoned. The *second site*—that of a temple buried in the sand—has been idle, pending the arrival of wheelbarrows, which have just reached us. The two days' work which, during this fortnight, the temple site has received, resulted in the discovery, among other things, of a statue of Hades seated, with the triple-headed snake-entwined Cerberus by his side. The statue is in dark blue marble, the flesh surfaces being given in white, a combination which recalls in some degree the famous Sarapis of Bryaxis. Of other finds I may mention a series of five inscribed statue-bases which were found in a cement floor, apparently of an olive-press, on the outside of the Agora site. One of these formerly carried a statue of the Empress Livia. Many fragments of other inscriptions have been found, but these five are the most important."—*Athen.*, March 15.

Messrs. TUBBS and MUNRO write under dates of March 15, 31; April 12: "Having opened up the Agora throughout its length, two problems were left us: the hillock at the southern, the *Loutron* at the northern end. The hillock proves to contain an open court, perhaps enclosing an altar, but certainly representing the *ara foci* of the later city. Here were grouped the dedicatory statues and public inscriptions, a few of which we have recovered. One of these apparently bears record to a victory gained by Ptolemy Philometor, presumably over his brother Physkon. With this inscription may, perhaps, be connected the remains of a colossal marble trophy (?) found near by, of which no more than the stump and one thigh now remains. A second inscription from the same spot deals, it would seem, with fines inflicted for trespass on the lands of Zeus Olympios, and is of special interest. Not far from the hillock, and near the southeastern

end of the colonnade, we came upon a marble head (female) of more than life-size. Though of very fair work, it was much mutilated, and we have failed to find the remainder of the statue.

"The Loutron itself, between which and the colonnade intervenes the wall of the later city, built upon the north front of the outer colonnade wall of the Agora, proves to have a length of 198 ft. and breadth of 75 ft., a proportion as nearly as possible of 3 : 8. The southern side was strengthened by piers having engaged columns at each angle: of these we have opened four, but, rather singularly, they are at irregular intervals. The west end had in front of this wall, itself 12 ft. thick, a second wall some 7 ft. 6 in. through, and standing 10 ft. away. The interior was vaulted, and apparently there were four arches to the width, as we have found a triple line of pedestals for the springs. The flooring was of cement, and was extraordinarily strong; in two days' work we only succeeded in cutting through 2 ft. 6 in. of it, and even then had not reached its limit. This agrees with other indications in confirming the traditional name of the site as the reservoir of Roman Salamis. Probably the piers, which are of immense strength, served as well to carry the aqueduct as to support the building itself against the lateral pressure of the water within.

"On our *second site*, that of the later shrine, near the forest-guard's house, much progress has been made in clearing away the upper sand layer. The inner western wall has been laid bare, and has a length of 130 ft., with an intercolumniation varying around 8 ft. 6 in. Though poorly built it is in a remarkably sound condition, the lower courses unbroken, seven columns complete without a fracture, and almost every base in position. The columns are, according to late Roman practice, uneven in length, and the bases lie at different levels. The outer wall is 17 ft. 6 in. and 16 ft. 7 in. distant respectively, according as the measure is taken on the west end or the south side.

Fourth Site.—About March 4, work having begun on a fresh site, a slope "where the last billow of rising ground merges itself in the flat land of the ancient mouth of the Pedaïos, we have within the last few days come for the first time upon a really ancient layer. Fragments of pottery are numerous upon the surface, and a few feet below there have come to light pieces of red-figured ware, of Cypriote vases of the older class, of *Kleinmeister* black figures (one such fragment inscribed), of earlier rude black figures with incised lines, and finally two portions of an amphora of early Rhodian work representing part of a zone of deer grazing. As yet we have fragments only, the sole objects moderately complete being heads in terracotta, one or two semi-Phoenician in style, the others probably fourth-century, and certainly under the influence of developed Greek art. Thus we seem to have hit a corner of Salamis as it was long before the era of

Evagoras. Interesting terracottas of excellent archaic and developed style continue to turn up, with specimens of the early Greek pottery of various types. The latter included a fragment of vase, probably Rhodian, with a large beast upon it painted in red, the head only outlined; a bit of *Kleinmeister* kylix with a female head of the well-known type; and a piece of red-figured Attic ware of the best fifth-century style; also fragments resembling the early Corinthian makes. The neck of one black glazed vessel bears the scratched inscription $\Sigma\Omega\Theta\text{Ρ}\text{Ο}\Sigma$. There being no sign of tombs, the supposition of a neighboring early temple-site was natural.

Fifth Site.—Another venture has been made on the highest point in the ancient city. There are the lowest drums of two large limestone columns still in position; but the ground is heavily choked with late accumulations, and not much progress has yet been made. A Roman portrait-head and fragments of a marble statuette of Aphrodite are all that the site has hitherto yielded. It seems to have been occupied by a large Roman house or small palace, and had an older layer beneath, which also was productive of little beyond *débris*. The results not justifying further work on this site, it was closed.

The Sixth Site we are now also probing lies between the Agora and the granite columns where we first started. It is littered with the *débris* of a very large building, including numerous fragments of marble and blue blocks, and the drums and capitals of enormous columns of the same type as those of the Agora colonnades, but even larger. Two bases have been discovered *in situ*.

The Seventh Site (Cypriote Shrine) "is an outlying one, a rocky rise between the two branches of the river. Along the base of the rock we are finding numerous fragments of terracotta figures, ranging from a few inches in height to colossal size. Most of the figures are male and bearded, and adorned with color, chiefly red and black. One, about two and a half feet high, is almost perfect. They are well executed, and seem to be of genuinely archaic style. With them we find scarabs, Cypriote pottery, and odds and ends. Certain terracotta fragments are extremely interesting. They are decorated with elaborate patterns in red and black on light ground, and with human and animal figures of the very earliest type. We have here a Cypriote shrine, plundered, indeed, but of a good epoch. We have found several small objects, chiefly scarabs and porcelains, and in particular a seal with strange characters, which might be called 'Hit-tite.' Besides various terracotta and limestone figurines, more or less complete, there are also large pieces of terracotta, perhaps from colossal statues, with elaborate and striking ornamentation in black and red, and in some cases with figures of men and animals almost 'Tirynthian' in character."

Second Site.—During the fortnight (March 17-31) good progress was made with the sand-site. The west wall is sufficiently cleared, and great

part of the north wall. The work was transferred to the east side, and the principal object aimed at is the finding of the east wall, especially the corners. The site now seems to be an open court with stoa all around, rather than a covered temple. This site gained in importance. April began with the discovery of three marble statues—one life-size, one just above ordinary stature, and the third a colossal figure. The first two are practically complete but for the heads, and are Roman 'drapery' figures; the third, a female statue, preserved from the girdle down, is of far finer work. It may have been a divinity. By the side of the large statue was a limestone column standing upright; but a subsequent fall of sand has prevented our ascertaining whether it was in position. Not many feet away southwest is another limestone base-drum, apparently in place; and as we have opened a third limestone column (prostrate) at the corresponding southeast end it would seem that there was a series, to which also a corner base (reused) at the southwest will belong. Thus we have a first older line than the marble columns which occupy the existing wall. A second series is that of large marble columns, fluted in later shallow fashion, which lie prostrate all along the line of the east end, and to which probably belong three capitals of delicate work and large size. The height of the columns (shaft only) is 21 ft. 9 in., and their top diameter 2 ft. 4½ in. The base end is in no case sufficiently cleared to enable its measure to be taken. Whether in these columns we have a more imposing sea frontage, the supports of a new building perhaps at right angles with the temple, or the remains of a slightly older temple on the same site, has yet to be seen. These columns have suffered greatly in an attempt to cut them up and move them, perhaps at the time when Famagosta was being built. One series of the limestone columns (and an additional base seems to indicate that there were two series) has almost certainly belonged to an older temple, whose *débris* has been used for the later erection. A fragment of marble plaque has turned up, containing portions of twelve lines of an inscription, which indicates the shrine as that of Zeus; the portion containing the epithet, if there were one, is not to hand; so that it is impossible to say with entire certainty that we have found the temple of Zeus Salaminios."

TOMASSOS.—Excavations have recently been conducted at Tomassos in Cyprus, on behalf of the Royal Museum at Berlin, by Mr. Max Ohnefalsch-Richter, who for ten years past has been active in archaeological work in the island. A large number of graves have been opened belonging to the transition period from the bronze to the iron age. Most of the vases found in these graves are hand-made, though some of the same size and form were turned on the potter's wheel. A mass of helmets, coats of mail, swords, lances, daggers, axes, knives, candelabra, kettles, buckles, etc., have been dug out. Among the iron swords are several gigantic speci-

mens, whose hilts are adorned with ivory, and with bronze nails tipped with amber or silver heads. Golden armlets also have been found, similar to those discovered by Dr. Schliemann at Troy. Colossal iron spears, with hooks and wooden shafts, had been placed in the left corner of a grave, so as to form a pyramid. Evidence was obtained of horse and dog burial, which seems to point to a northern custom.

At a recent sitting of the Archaeological Society at Berlin, Mr. Furtwängler made a further communication referring to the most recent results of the researches of Mr. Ohnefalsch-Richter. On the site of two sanctuaries a series of votive gifts were unearthed—among them, a quadriga, with its charioteer of half-life-size, done in chalk; a colossal statue; and two archaic bronze statuettes. Graves dating back to the bronze age were opened, in which no iron whatever was found, and all the pottery was hand-made. Richer results were obtained in the burial places of the subsequent Græco-Phœnician period, with their splendid stone architecture. In two of them, which probably belong to the first half of the sixth century B. C., parts of the architecture imitate a wooden structure of very archaic type. A grave-chamber has dark doors, with an imitation of wooden locks. This points to a more ancient architecture in timber-work, as was argued by the late James Fergusson, in connection with some parts of the Lion Gate at Mykenai. Among other curious finds may be noted a helmet with a very complicated visor in hinges.

In a paper on *The Pre-Babylonian and Babylonian Influences in Cyprus*, as well as in more recent writings, Mr. Max Ohnefalsch-Richter has expressed his belief that the oldest stratum of Cyprian culture was Phrygo-Thracian, kindred to that of ancient Troy.—*Academy*, May 17.

ASIA MINOR.

(ADDENDUM.)

ASIA MINOR EXPLORATION FUND.—PROPOSED EXPEDITION FOR 1890.—The committee of the Asia Minor Exploration Fund appeal once more for aid toward the important work which Professor W. M. Ramsay has carried on for the last eight years with brilliant success. Professor Ramsay's travels and researches have hitherto been for the most part confined to Phrygia and Galatia. The great importance of the results which he has obtained has been universally recognized both in Great Britain and abroad. Apart from the wealth of fresh material in the shape of inscriptions and monuments which he has placed at the disposal of scholars, his topographical studies have thrown a flood of light upon the history of the country, from the prehistoric times of the old Phrygian kingdom down to the declining days of the Roman Empire, and have made possible an accurate

map of these little-known regions. A full account of his explorations is given in the lengthy report which he has this year presented to the Royal Geographical Society.

Professor Ramsay now proposes to break fresh ground further to the east. The chief objects of the expedition projected for the ensuing summer are:—

(1) To complete Mr. Sterrett's Pisidian explorations, which still leave uncertain the situation of a number of cities.

(2) To construct the ancient map of Cilicia Tracheia and Isauria. A small number of cities have been determined, but the majority have yet to be discovered.

(3) To explore the eastern parts of Kappadokia and the borders of Lesser Armenia, for the double purpose of examining all the Syro-Kappadokian monuments, commonly known as "Hittite," and of determining the system of military roads by which the Romans defended this part of the eastern frontier of the Empire.

The route proposed for the expedition is as follows:—To start from Kelainai-Apameia, the present terminus of the Ottoman Railway, and work eastward, taking up in order the different points which await determination in Pisidia and Isauria. The explorers would then proceed north-east into the region of the Anti-Taurus, and, after traversing it on various lines, would either make for a Black Sea port or, if time permitted, return to Smyrna, selecting an untrodden route through the northern provinces.

Professor Ramsay will be accompanied by Mr. D. G. Hogarth, Fellow of Magdalen College, Oxford, whose fitness for such work has been proved both in Asia Minor and in Cyprus.—*London Times*.

EUROPE.

GREECE.

TECHNICAL PROCESSES IN GREEK SCULPTURE.—At a meeting of the British School (Feb. 14), Mr. Ernest A. Gardner read a paper on the technical processes in Greek sculpture, with special reference to a number of unfinished statues found in various degrees of progress, and now collected in the Central Museum at Athens. Mr. Gardner principally concerned himself with the methods of fourth-century sculptors, most of the examples being of that period, but he first noticed a specimen of the early straight-limbed Apollo type, which was found in the quarries at Naxos. This was in the first stage of progress, the figure having been merely roughed out. He showed how this had been done, much as a beginner would proceed to work at the present time, the sculptor first tracing the lines of the figure on the face and sides

of the block and then proceeding to rough out the limbs by cutting off the marble in planes parallel to the face and sides. The surface clearly indicated that this had been done with a pointed punch. In this connection Mr. Gardner said that the squareness of the early statues need not necessarily be traced to a wood tradition, and he was not inclined to accept the theory that most of the early *xoana* were of that material; he showed that the meaning of the word did not imply this, and mentioned several which were known to have been of marble. He argued that roundness rather than squareness of section was characteristic of wood, and he thought that the square appearance of early marble figures might more naturally proceed from the material itself, the rectangular block of marble on which the sculptor set to work. He then proceeded to trace the processes of execution in the fourth century, and the nature of the tools employed, basing his remarks principally on a statue from Rheneia, which showed different degrees of progress on the various portions of the figure, but referring also to the others as he went on. Beginning with the rough marble block, he showed how they first roughly shaped out the figure with a punch driven with a hammer, and not with a pointed axe or hammer, as had sometimes been assumed; how they afterwards dressed down the lines more carefully with a similar but smaller and sharper instrument, and how, when they had got the figure thus blocked out, they proceeded to model the limbs by cutting down the surface gradually with a curved chisel; and he pointed out on the statue small flat cup-shaped sinkings showing the beginning of this process. The general surface was then finely worked over in detail with a claw-shaped chisel, the form of the limbs being carefully worked up, and the folds of the drapery were drilled out with the running bore. He mentioned, as an instance of a different treatment, an early archaic figure from Delos, where the use of the saw could be distinctly traced in the narrow sunk lines of the parallel folds of the straight hanging drapery. He went on to show how the forms of the muscles were afterwards accurately mapped out or outlined, and how the whole figure was again gone over with a finer claw chisel, and finally finished off with a flat one. He had come to the conclusion, from a careful study of these statues, that the sculptor did not work from a finished model, although he may have had a rough study beside him, but rather that he worked quite freely, developing his ideas as he proceeded.—*Builder*, March 1.

NORTH DOORWAY OF THE ERECHTHEION: ITS DATE.—A note is published in the *Builder* of March 22, on some investigations made by Mr. R. W. Schultz, a member of the British School at Athens, which have led him to peculiar conclusions regarding the age of the large doorway in the north portico of the Erechtheion, called by the Greeks Ἡ ὡραία πύλη, "the beautiful door." It has generally been accepted as contemporary with the

rest of the building. A careful study of the mouldings of all the buildings on the Akropolis led Mr. Schultz to contend: (1) that none of the door now *in situ* is part of the original work; (2) that the present jambs belong to a period not far removed from the time of the building; (3) that the lintel, cornice, and brackets are still later additions; (4) that they belong, however, to late-Greek and not to Roman times. He thought that a curious rebated stone west of the present lintel belonged to the original lintel, and he concluded (1) that the first north door consisted of a lintel built in with the walls, having mouldings worked on it, and of thin jamb linings having a projection of about 2½ in. from the wall face, and with bronze linings inside; (2) that the lintel, having been damaged, was cut out, leaving the ends in, and heavier jambs were inserted to take the whole weight of the new lintel, their return face being dressed and the bronze linings done away with; (3) that the present lintel is apparently still a third one, a copy of the second, inserted about the second century B. C., when the brackets also were added. As further evidence of the later insertion of the lintel and cornice, he instanced the holes cut on the underside of the stones for the purpose of needling up the wall during the alteration, and the way in which the stones have been wedged up afterwards. The variety of proof with which Mr. Schultz supports his opinion will be seen when his paper is published in the *Journal of Hellenic Studies*.

THE GAME OF HARPASTON.—In the *Classical Review* for April, 1890, Mr. E. G. Marindin undertakes to explain the obscure Greek game called *harpaston* (ἁρπαστόν), which was played with ball. It is spoken of by Martial (IV. 19; VIII. 32; XIV. 48), Athenaios (I. p. 15), Eustathios (on *Od.* IX. 376), Pollux (IX. 32), Sidonius (V. 17), and especially Galen (περὶ τῆς μικρᾶς σφαίρας). Against Marquardt's idea, that there were three separate games, *ἐπίσκοπος*, *φενίνδα* and *ἁρπαστόν*, the writer shows them to be but two games. *Pheninda* was the old name for *harpaston*, and this was identified with *μικρὰ σφαίρα*. The players were divided into two opposite groups on a square or oblong field, each having a base line or goal. In the centre was a *mediocurrens* or ὁ μετὰν who was placed on a middle line. The main object, apparently, was to throw the ball so that it should finally drop beyond the opponent's base line, thereby scoring a point. It was probably started from one or other base line and thrown from one player to another, the opposite side thwarting whenever they got an opportunity, and throwing it back in the contrary direction. The duty of the *mediocurrens* was to catch it as it went past, and throw it either over the opponent's line or to some unguarded point, or pass it to one of his own side advantageously posted. The ball could be taken at the volley or on first bound, but was "dead" on second bound. Of the main body, some guarded the base line and made long throws to the centre; others

played nearer the centre and passed the ball backward or forward in attack or defence. They were not stationary, like those at the base, but circulated according to certain strategic rules; the strongest being placed nearest the centre to grapple with the enemy's rushers or with the *medicurrents*. The game was so varied as to give the widest range of practice in running, throwing, wrestling, jumping, dodging, *etc.*, as well as in strategy and general head-work. It is not like any modern game, but has elements of foot-ball, lacrosse, and tennis.

AIGILIA (Island of).—There having been found a statue on the island anciently called Aigilia, B. Staes was sent out by the authorities in Athens to investigate, and, if necessary, to excavate on the ground. Aigilia, now called Antikythera, lies about midway between Krete and Kythera. At present it contains about 80 families, though only a small part of it can be cultivated. The ancient city lay upon a high cliff whose summit, strengthened by several towers, served as a stronghold for the lower town. The wall of the so-called isodomic structure is preserved in many places to the height of 3 or 4 metres, and can be traced throughout its whole extent. The wall probably was built by enemies of Lakedaimon, possibly by Athenians during the Peloponnesian war (when the same was the case in Kythera). The statue was found in a field, and, when excavations were made on this spot, there was found a mosaic pavement formed of squares and circles fastened with lead. This evidently belonged to some Roman house. Then came to light a square base bearing a dedicatory inscription to Apollon Aigileus made jointly by a Thessalian and an Athenian. The form of the letters shows that the inscription belongs to the fourth or at least the third century B. C., and probably was under the statue previously found here. The statue itself belongs to the same period: it represents a man clad in the long chiton, and girded high up on the chest. He rests lightly on the left foot, the right leg being relaxed. The head is wanting, as well as the right hand and the left as far up as the elbow. The person represented was undoubtedly Apollon, holding the lyre in the left hand, the *plektron* in the right. The statue and its inscription have been transferred to the National Museum at Athens. A search for the shrine itself led to the discovery of a foundation wall, 12 meters long, made of squared stones (taken from the locality) which were fastened firmly together with clamps. Remains of two cross-walls, also, were uncovered, but no architectural member. In the ancient city itself was found a prehistoric rock-cut tomb. It is entered by a square doorway which leads into a large four-sided chamber. Opposite to the entrance and on the right hand of it were two other doorways leading into smaller rooms. This tomb has long been emptied of whatever remains it had, and has been used in recent times as a place of concealment during revolutionary disorders.—*Ἀρχ. Δελτίον*, November, 1889.

ATHENS.—RECENT EXCAVATIONS.—Akropolis.—After the Akropolis itself had been entirely uncovered, the part between the Propylæa and the Beulé entrance was excavated. In one part, where the deposit of *débris* was of considerable depth, the torso of an undraped youth was found. It was of about natural size and of fourth-century workmanship. An investigation of the rampart supporting the temple of Nike Apteros was begun, but, as the materials of which the rampart is composed seemed not very firm, it was feared that, if rain-water penetrated it, some damage might be done to the temple itself: the excavations were therefore postponed till a more favorable season of the year.

The Olympieion.—The Archaeological Society has made some diggings near the peribolos of the temple of Zeus Olympios, which brought to light the foundations of a large Roman building, probably a gymnasium (*Δολιόν*). According to the writer in the *Mittheilungen* (1889, iv, p. 414), it is a Greek construction of *broecia* blocks and contains remains of much earlier polygonal walls of limestone. The Society expects soon to uncover the entire space within the circuit of the temple of Zeus, and to make there some fruitful discoveries.

Altar.—North of the polygonal wall which runs about along the axis of the Propylæa of Perikles, the rock has been uncovered several meters lower than to the south of this wall. On this site, a few meters from the Beulé gate, an altar was found *in situ*, known as such from the side volutes. It probably belonged to the altars erected in the Pelargikon and against whose increase Lampon's motion was directed (*CIA*, iv, 27. b). It was first thrown down, probably, in the early-Roman period, on the erection of the great open staircase.

Dipylon.—At the Dipylon, it has finally been possible to remove the earthen rampart that traversed the site where the excavations are being carried on, which had rendered the search for the foundations of the gate and wall very difficult. The conduit of the main street of the city, which lay in the earthen mound, has been removed. It is now possible better to survey the fortifications and the foundations of their gate in which it has been customary to recognize the *ἑρὰ πύλη*. It is now evident that there is no ordinary gateway, as the necessary projections from the wall, which exist in the Dipylon gate, are not there and seem never to have existed. It is more likely to suppose that here was the opening in the city-wall through which flowed the Eridanos, according to Dörpfeld's hypothesis.

By the side of the river-bed there appears to have been a narrow pathway. The ancient bridge over the Eridanos, built of horizontal slabs, is now to be recognized at the west end of the field of excavations, but the excavations have been made only deep enough to disclose the upper layers of stone of the bridge. It would be necessary to excavate down to the original river-bed.—*Ἀρχ. Δολιόν*, Nov.-Dec., 1889; *Mith. Inst. Athen.*, 1889, iv, pp. 413-15.

INSCRIPTIONS FROM THE AKROPOLIS.—Dr. Lolling, who has charge of the inscriptions, publishes the following finds. (1) The chief one consists in part of a slab of Pentelic marble ornamented at the top with a relief. This relief is in a much damaged condition, but there is still distinguishable the figure of a woman with a horseman on either side of her and standing in front view. The inscription itself is also much mutilated. It belongs to the year 386/5 B. C., just after the peace of Antalkidas, and makes us acquainted with a king *Ebrytelmis* of the powerful Thracian tribe *Odrysei*. History records that another king of the tribe had about this time been a valuable ally of the Athenians, and this new king is probably his successor. The inscription relates to the renewal of friendship with the Athenians, and forms an addition to a group of several already published that relate to the affairs of Athens and Thrace. (2) Another inscription found on the Akropolis belongs in the year 287/6, and relates to the gift of proxeny to certain benefactors residing in the islands. (3) A third inscription relates to Androtion and Timokrates, and shows them to have had charge of the treasures of Athena at that time. They are both well known from the speeches of Demosthenes. The inscription has lost its date, but probably belongs soon after 376. The chief point of interest about it is that it is the same inscription as that in *CIA*, II, 74^a, and evidently the older copy, as the present inscription is somewhat effaced at the right-upper corner. In making the second copy, a larger slab of stone was used and greater care was taken in inscribing it, although the matter itself is slightly altered in some unimportant particulars. The copy evidently shows that the inscription was regarded as one of some importance. A statue is mentioned in it, which in all probability is the famous Athena of Pheidias. (4) A fourth inscription is upon the curved face of one of several stones used in forming the circular base of some votive monument. Other pieces of the same base have also been found, some of them inscribed and others not. Demetrios, the artist, is already known by several other inscriptions. The monument belongs to the first half of the fourth century B. C., and was erected by a certain Kephisodotos.

DEGREE OF THE FIFTH CENTURY AND THE ARCHITECT KALLIKRATES.—In clearing some ground near the church of St. Andrew (*Ἅγιος Ἀνδρέας*), the lower part of a white marble stele was found by M. Lampakis. It contained the close of a *στοχχρόν* inscription of which sixteen lines remain in tolerable preservation. It mentions Kallikrates the architect of the Parthenon and of the long walls. Thus it would seem that the inscription relates to some construction of 440–430 B. C., probably the completion of the walls of the Akropolis. The construction mentioned in this inscription, as to be finished in sixty days, is specified in the lost lines. M. Foucart suggests that it was a guard-house at the entrance of the Akropolis.

for its purpose seems to have been to prevent fugitive slaves and sneak-thieves from seeking refuge in the Akropolis, where the altar of Athena Polias was a recognized asylum. The duty of watching this barrier was confided to three guardians: the text reads: "there will be as guards three archers taken from the tribe charged with the *prytaneia*." The inscription reads: [τ]ην πόλιν . . . ο . . . [ο]ικο[δ]ομησάι ὁ[π]ος | ἀνδραπέτης μὴ εἰ[σ]ί|ηι
 μηδὲ λατοδύτ[η]ς - ταῦτα δὲ ἐγγρ[α]ψαί μὲν Καλλικρ[ά]τη(ν) ὅπως ἀρίστα
 κοί[τ]ι εἰτελέσται σκ[ε]υά[σ]αι[τ]ο, μισθώσα[ι] δὲ τοὺς πωλητὰς ὁ[π]ο[ι]οῦσ[αι] ἄν
 ἐντὸς ἐξή[κ]οντα ἡμερῶν ἐπισκ[ε]ψασθῇ, φύλακας δὲ [εἰ]ραὶ τρεῖς μὲν τοξό[ι]ας
 ἐκ τῆς φυλῆς τῆς [π]ρυτανειοσύνης.

The decrees orders Kallikrates to draw up the plans and lays down two conditions: good work for the lowest price possible, conditions that are to influence him in the plan, the choice of materials, and the method of construction. The plans are to be awarded by the *poletai*, a college of ten annual magistrates charged with the awarding of public contracts. Sixty days are given to the contractors to finish the work. In describing how the gate should be guarded, there is certainly an omission: police-work in the fifth century was done not by citizens but by public slaves and especially by Scythian archers. Probably it is three of these archers that are intended, who may have been under the orders of one or more of the *prytaneia*. The form of the letters indicates a few years after 450 B. C. as a date for this construction but slightly anterior to the construction of the Propylaea in 437-432.—*Bull. de Corr. hellén.*, 1890, pp. 177-80.

ARCHAIC POROS GABLE-SOULPTURE.—Herr Brückner has published, in the *Athenische Mittheilungen* (xiv, pls. II, III), a restoration of the very early poros gable-group whose subject has been recognized to be Zeus fighting Typhon, and Herakles fighting Echidna (see *JOURNAL*, v, pp. 95-6 and *passim*). The remaining parts of the gable are only the head of Zeus and portions of his thunderbolt, the body of Herakles and a part of the serpent, as well as the whole of Typhon with trifling exceptions: the rest is conjectural restoration founded on such sources as the Munich vase representing the combat of Zeus and Typhon. *Cf. Revue Arch.*, 1890, p. 258.

DISCOVERY OF SUBTERRANEAN PASSAGES.—In the excavations around the Metropolis in the ancient monastery of St. Philothea, two subterranean passages have been found like those of the catacombs, to which leads a marble stairway.—*Athenaeum*, Jan. 4.

THE AKROPOLIS DURING THE BYZANTINE PERIOD.—Herr Strzygowski publishes, in the *Athen. Mittheil.* (xiv, pp. 270-96), an interesting paper (*Die Akropolis in albyzantinischer Zeit*) on the Akropolis during the early Byzantine period. Many fragments of Byzantine architecture and sculpture have been found during the excavations, but nothing has been done to classify them, or establish their dates: many belong to the fifth and sixth centuries. Herr Strzygowski gives drawings of them, and compares them

to capitals, etc., of the churches of Chalkis, Prevesa, the Akrokorinthos, and Argos. In the author's opinion, the Parthenon was transformed into a church in about 435 under the title of Sta. Sophia. *Cf. Revue Arch.*, 1890, p. 259.

NATIONAL MUSEUM.—*Additions.*—During October 1889, there were brought in some 10 painted vases found in the recent excavations at **EREETRIA**. The larger part of them consist of white lekythoi, some very beautiful ones; and one seems to represent the myth of Boreas and Oreithyia. Besides these vases, the objects found by the French School at **THESPIAI** were also brought to the Museum. They consist of some painted vases, pieces of a colossal bronze statue, and fragments of smaller bronzes: among them a small Corinthian capital of bronze, a gilded spear-point, and several bases of small columns. The head of a small marble statue of Asklepios was the only addition of this material made to the Museum. A number of vases and figurines seized in **PARIS** were also added. One of the vases represents Theseus standing with his knee on the Minotaur, and another seems to show Athena overcoming the giant Enkelados. The terracottas are mostly draped women and girls in various poses. There are also, in this collection, a few men and boys, and they generally wear the petasos on the head and a short chiton over the shoulders. One of the terracottas represents an ape.

During November some 40 more vases from **EREETRIA** were brought in. White lekythoi were the prevailing sort, although black lekythoi, and lekythoi with red and with black figures, were also present in several examples. One of the figures is that of a young man carrying a peplos, which may be a reminiscence of a similar figure from the frieze of the Parthenon. Another vase shows a date-palm with a negress bound to its trunk by the feet and hands. Other vases figure Amazons and Centaurs.

Classification of Antiquities.—In the Museum on the Akropolis the classification and arrangement of the antiquities has been finished and at the same time similar work was begun on the National Museum. Fr. Wieseler, on the fiftieth anniversary of his activity as a teacher, presented to the General Office (*Ephoreia*) of Antiquities a copy of all his archaeological writings. Several important gifts of coins and vases have been also received from other private individuals.—*Arch. Δελτίον*, Oct., Nov., Dec., 1889.

MUSEUM OF GREEK CHRISTIAN ANTIQUITIES.—In three small rooms on the first floor of the offices of the Ecclesiastical Synod of Athens has been formed the nucleus of a museum of Greek Christian Antiquities. At present, it includes a series of objects connected with the architecture and ritual of the Greek Church, also a number of plans, drawings, and photographs of churches, mosaics, and frescos, old church-service books, and reproductions of illuminated mss. The architectural fragments consist

principally of sculptured slabs, ceramic ornaments, fragments of mosaics and frescos, portions of details of internal fittings, such as the *Ikonostasis*, pieces of pavement and of constructional detail. Relating to the ritual, are a large number of vestments, some of them beautifully embroidered, crosiers, flagons, chalices, and pattens (many of them of pewter), rich altar-crosses of silver filagree-work, often inlaid or picked out with gold and usually enclosing intricate and minute figure-subjects cut in olive-wood; also, several sacred-oil bottles, made of cast lead with ornamental borders and quaint figure panels, ceramic plaques for stamping the sacred bread, Christian lamps (hand and other), and large flagons for storing the lamp-oil. There are many stamped impressions of Christian inscriptions, and a number of old paintings of Christ and the Virgin, of saints and prophets, and a collection of about 800 Byzantine coins.—*Builder*, April 12.

ATHENA PARTHENOS AS A DEVICE OF ATHENS.—Mr. A. S. Murray illustrates, in the *Classical Review* for February, an engraved gem recently acquired by the British Museum. It is of sard and in the form of a scaraboid mounted on a silver ring. It was found in Cyprus, and, from the style of the engraving, belongs to a date shortly after 400 B. C. The subject consists of a figure of Athena standing to the front, wearing her helmet and aegis. At her left side are the shield and spear, the shield resting on the ground; at her right is the serpent associated with her worship on the Akropolis. But, whereas the Parthenos held out a figure of Niké in her right hand, the Athena on the gem holds the *akrostolion* or ornament on the stem of a ship, the recognized emblem of a naval victory. That it relates to some naval victory in which Athens aided one of the Cypriote towns seems confirmed by the analogy of the silver Cypriote coin attributed to Demonikos (400–368 B. C.) king of Kition on which is a figure of Athena of very much the same type as on the gem, though she is seated on the prow of a ship.

KALLIMACHOS THE SOULPTOR OF THE PARTHENON PEDIMENTS AND FRIEZE?—It has become generally recognized that the Parthenon frieze and metopes, although probably planned and designed by Pheidias were not executed by him. But Dr. Puchstein has recently sought to prove that the pediments and frieze were not due even to Pheidias' influence, but were executed at a slightly later date, perhaps by the hand of Kallimachos. His paper was read on Dec. 9 at the *Winckelmannsfest* in Berlin, and is soon to be published in the *Jahrbuch*. He relies for his proof of a later date on the use in the pediments and frieze of the *running-borer* invented by Kallimachos (according to Pausanias, i. 26) and first used between 437 and 430. His conclusions are as follows: "Of the art of Pheidias (whose works have entirely perished) the student is obliged to form his conception from a study of the closer copies of the Athena Parthenos, and by a comparison

of these with other works of the fifth century B. C. This leads to the conclusion that a peculiar characteristic of the original of the Parthenos was the markedly strong and simple treatment of the drapery, a style not adopted by Pheidias in the representation of the goddess in view of the Doric architecture of the Parthenon, but only the natural result of the stage his own artistic development had reached: for the Parthenos, designed before 447 B. C., belongs to the same epoch as, e. g., the Hippodameia of the east pediment at Olympia, or the Giustiniani Hestia. There is, therefore, no justification either for the attribution to the original Parthenos of the full freedom of style seen in the pediment sculptures and frieze of the Parthenon, or for the ascription to Pheidias or his workshop of this new and, especially in the treatment of drapery, more highly-developed style. Furthermore, the composition of the pediments and the frieze do not originate with Pheidias: for the one composition known to us in detail which is with certainty attributable to Pheidias—the recently-discovered Birth of Pandora on the Pergamene copy of the Parthenos—agrees entirely in style with the central group of the east pediment at Olympia. On the true author of the Parthenon sculptures (with the exception of the metopes) it seems possible to lay a tolerably sure hand by means of certain technical evidence. The pediment figures and the frieze are the oldest sculptures in which the so-called *running-borer* was used. These sculptures and the reliefs of the Niké balustrade differ from other contemporary and later sculptures precisely in such effects as are producible by this instrument, effects which are absent in these other sculptures—the Parthenon metopes, the frieze of the Theseion, the greater part of the frieze of the Niké temple, the Niké of Paionios and others—all of which are executed without the *running-borer*. According to Pausanias, Kallimachos, the inventor of the Corinthian capital, was the first who worked marble with this borer. That this discovery was made just at the time when the Parthenon pediments were set up (434 B. C.) is evident from the fact that the borer was not used in the Ionic capital of the Propylæa (which was begun in 437 B. C.), but was already manifestly in use in the capital of the Niké temple (about 430 B. C.). Hence, it is not unlikely that the discoverer of this new technique, Kallimachos himself, was the very man who executed the Parthenon pediments, and that in them we may recognize instances of the *elegantia et subtilitas artis marmorariæ* for which he was famous.—*Berl. phil. Woch.*, 1890, No. 3.

FRAGMENT OF A STATUE OF ATHENA.—The pieces of sculpture found during the recent clearances around the Parthenon have been the object of the study of Dr. Sauer, of the German School, and he thinks he has discovered amongst them a fragment belonging to one of the two pediment statues of Athena.—*Athenæum*, March 15.

THE SCULPTOR PHILISTIDES.—M. P. Foucart publishes, in the *Bull. de Corr. hellén.* for March–April, some inscriptions found on various sites in Karia. On the site supposed by Judeich (*Mith. Athen.*, xii, 331–46) to be that of Pedasa, at Kara-Kharup, six hours from Halikarnassos, was an inscription with the name of an unknown sculptor, *Philistides of Athens*. It reads: ΦΙΛΙΣΤΙΔΗΣ ΑΘΗΝΑΙΟΣ | ΕΓΟΙΗΣΕΝ. It is on a base, and the letters indicate a good period, perhaps the second half of the fourth century B. C. The sculptor Philistides may have formed one of the group of artists called to Halikarnassos by Mausolus and his successors.

ATTIKA.—At the request of the Berlin Academy of Sciences, the Prussian Minister of Public Instruction has placed at the disposal of the German Archæological Institute the funds required to extend to the whole of Attika the cartographic work begun in 1881. Consequently, Reimer's publishing house will publish the maps of Salamis and the coast opposite to it, of Eleusis, of Phyle, of Oropos and of Rhamnos. Those of Marathon and Dekeleia are engraved and will soon appear.—*Revue Arch.*, 1890, p. 266.

BOURBA (Attika).—*Pre-Mykenæan Tombs.*—An ancient tomb excavated here, in September, presented some curious features. It had been dug one meter deep in the old earth, and filled with wood on which the corpse had evidently been placed to be burned, after which it must have been covered with earth. A considerable quantity of charcoal was taken out of the tomb, and it was observed that the lowest layer was of vine branches, while the remainder consisted of large pieces of wood, some of them 25 centim. in diameter. Beneath the pyre there was an aperture for the purpose of ventilation. It is believed that this tomb is more ancient than the Mykenæan era, since another tomb for inhumation, which clearly belonged, from the style of its vases, to the Mykenæan era, was found above it.

Continued excavations in this locality brought to light more tombs for incineration, like those previously found here. In the mound which covers several graves were found archaic black-figured vases and an inscribed base belonging to the sepulchral monument. A piece of the plinth on which the statue itself stood was also found bearing traces of the feet. An inscription on the lower block bore the name of the artist, *Phaidimos*. One of the graves was circular and walled with stone, like the tomb of Menekrates in Korkyra. After the investigation of these graves had been completed, a sepulchral mound some few miles distant in a place named Petreza, on the road to Marathon, was undertaken.—*Αρχ. Δελτίον*, Oct., Nov., 1889.

CHAIRONEIA.—The Greek Minister of Public Instruction has decided that the fragments of the Cheronean Lion are to be put together upon the original base.—*Athenæum*, Jan. 25.

ELEUSIS.—A large Roman bath has been discovered similar to that found at Athens near the Olympieion. New expropriations will have to be made for its excavation.—*Athenæum*, May 3.

ERETRIA.—Investigation of the burying-ground discovered near the shore has been continued. The tombs are mostly older than the fifth century and are constructed of large flat tiles, with the exception of a few made with curved tiles. There is no use of poros stone or marble in these tombs. The objects found were mostly lekythia, figurines, and various sorts of vases, which were usually placed within the grave near the feet of the corpse. In another part of the town was found a double row of tombs, but all of them had been pillaged. One of these tombs was a marble sarcophagus: a plain mirror placed on the left side of the head and some smaller objects including an alabaster pyxis placed near the right hand of the corpse were its chief contents. All the smaller objects were taken to the National Museum at Athens, while the marbles and sepulchral inscriptions were left in Eretria.—*Ἀρχ. Δελτίον*, October, 1889.

KYME (Eubœia).—**PREHISTORIC TOMB.**—At Kyme in Eubœia a prehistoric tomb of quite original form was found. Some peasants, in making lime, came, at a great depth of soil, upon an empty tomb, 2 met. long and 70 centim. wide. The bottom was formed of a double series of fire-baked bricks, and the four walls of bricks laid thin end upwards. Inside were found two lekythoi with traces of black coloring.—*Athenæum*, Feb. 8; *Chron. des Arts*, 1890, No. 7.

LAKEDAIMON.—Excavations of the Archaeological Society have uncovered a small arched tomb. Its contents, however, were found to be quite insignificant.—*Ἀρχ. Δελτίον*, Nov., 1889.

LYKOSOURA.—**TEMPLE OF DESPOINA=PERSEPHONE** (see vol. v, pp. 378, 491).—The temple was found on the north side of the ridge known as *Τεργή*, about 100 metres to the west of the ruins of a chapel of S. Athanasios. The ground-plan of the temple has been clearly made out, and it is seen to be a Doric hexastyle-prostyle, twenty metres long by ten broad, the *cella* being thirteen metres long. In the walls of the *cella*, the lower courses are of masonry of local stone, the upper courses are of unburnt brick. The temple was oriented from east to west, and had a marble portico at the entrance, which seems to have been filled with votive offerings, the bases of which are extant.—*Berl. phil. Woch.*, December 21, 1889.

THE SCULPTURES OF THE TEMPLE.—Dr. CHARLES WALDSTEIN writes from Athens to the *Athenæum* (of March 22) under date of Feb. 28:

"The peculiar and exceptional value of the Lykosoura statues is that they are beyond a doubt the statues described by Pausanias (VIII, 38) as being in the temple of Despoina, the works of the artist Damophon of Messene. Now of this artist no work is extant, and this was to be

regretted the more as he certainly was one of the most interesting figures in the fourth century B. C. He was a contemporary of Skopas, Praxiteles, and Lysippos—probably older than Lysippos. He was peculiarly interesting, as he differed in spirit from his contemporaries in choosing exclusively for representation in his art the gods and higher religious types of Greece. He appears to have maintained the great spirit of the fifth century to a higher degree than his contemporaries, as in technique also his temple statues bridged over the gold and ivory work of Pheidias and Polykleitos and the marble sculpture of Skopas and Praxiteles. When the great gold and ivory marvel of Pheidias, the statue of Zeus at Olympia, was falling to pieces in the fourth century, it was Damophon who restored it to the entire satisfaction of the Eleans. Many of his statues were *akrolithic*, which is the next stage to gold and ivory, and a substitute for it, marble taking the place of the ivory, and wood, gilt and painted, the place of the sheets of chiselled gold. But, like his famous contemporaries, the material he used with preference was marble, while not a single work of bronze is mentioned. To have come into possession of an original work by this artist, and at the same time of a temple statue (*θεῖον*), is an unprecedented piece of good fortune.

"The excavations undertaken by the Greek Government were begun last July, and ended in November. The temple of Despoina has been cleared, and the *bathron*, or base, of the sacred statue can be distinctly seen at the east end of the *cella*, which it almost fills up. The *cella* is 10 m. wide. Of the statues which stood on this base most of the fragments have been discovered, besides sculptures which decorated either the base or the thrones upon which the goddesses were seated. There are about a hundred fragments in all. There were four figures on the base, all of them over life-size, two of them colossal. One of the heads belonging to the larger figures is now here, and the two heads of the other figures. One torso and five pieces of drapery were so large that, the roads being bad, they could not as yet be transported here. The fragments that I have been able to examine, though they manifest in the heads greater individuality than is possessed by works belonging to the fifth century, are large in style. The most striking were some pieces of drapery belonging to colossal figures, the folding perfect in its indication of texture, while they are adorned with figures in low relief of most exquisite workmanship. Some had figures of Niké and Tritons, with curious hybrid beings, or perhaps a scene of metamorphosis, running figures changed into animals. M. Kabbadias thinks this has some bearing on the worship of Demeter. A larger piece of drapery is adorned with flowers in low relief. Doubtless we have in this work a reminiscence of the gold drapery adorned in *repoussé* and enamel. There are small figures with fish-tails carrying circular

baskets on their heads, similar to the object on the head of the colossal fragment from Eleusis now at the Fitzwilliam Museum, Cambridge. This is probably connected with the worship of Demeter. But I cannot tell whether these figures decorated the throne or the base."

MEGALOPOLIS.—EXCAVATIONS BY THE BRITISH SCHOOL.—Mr. Ernest Gardner, who superintends the excavations by the British School, writes from Athens under date of March 26 and April 28: "The site of Megalopolis has at last been selected as the field of this season's excavations in Greece by the British School, and work has now been actually begun. Our party reached Sinanou, the modern village, half a mile from the ancient site, on Sunday, March 16.

"The site of the ancient town lies upon the two banks of the broad stony bed of the Helisson; and the description of Pausanias, which is remarkably explicit, enables us to fix approximately the position of the various buildings. These are grouped by him around the Agora on the northern bank, and the theatre on the southern bank of the river. Many vestiges of ancient walls and columns are scattered over the site; but only a few are in their original position, and none, except the theatre, could be identified with certainty before excavation. The site of the Agora seemed to be indicated by a level space strewn and surrounded with fragments of stone and columns.

First site (Stoa Agora).—"We began excavations (March 18) upon a line of columns running north and south, near the northwestern corner of what we supposed to be the Agora. We found that these were upon a base, but one of later period than the columns themselves, having an Ionic architrave built into it. This line of columns and another parallel to it ran out from a wall of much better construction preserved for about six courses. This great wall was one of the enclosing walls of an enormous triple portico running east and west across the north of the Agora; we followed the northern enclosing wall for about four hundred feet, and most of the column bases were *in situ*; we also found one or two entrances from the north. We conjectured that this building, which apparently had one row of Ionic, one of Doric columns, and to which belong most of the drums scattered over the site, was the same seen by Leake in part; but its position corresponds to that of the Stoa Philippeios rather than to a portion of the gymnasium. We were, however, unable to finish our work either on this building or on another in a small enclosure near the river, at the southeastern corner of the Agora (perhaps the temple of Zeus Soter), owing to difficulties raised by the occupiers as to compensation for their crops, and a misunderstanding with the Government upon this point. We shall be able to continue our work here when the crops are got in. Numerous column bases, at various levels in the stoa, offer difficult and complicated

problems that cannot yet be solved; but it seems clear that at least a part of it must have been roofed over.

Second Site (Theatre).—"We made trial of the other side of the river near the theatre, where the ground was lying fallow. Here a great trench cut the stage buildings of the theatre, and further down a plain column *in situ*. The stage buildings, which are in some places as much as nine feet below the soil, are of fourth-century construction, and show no traces of later alterations, though they have been partially destroyed. The plan seems to be complete, and also to differ from that found at Epidaurus, Oropos and elsewhere. The theatre seems likely to equal, if not to surpass, in interest any that has hitherto been excavated; but the soil will have to be removed to a depth of about 13 ft. in the orchestra before the stage building and seats can be properly cleared. This great accumulation is due to the nature of the embankment of the caen, which is partly artificial and consists of a mound of earth held in by retaining walls; naturally, a large amount of this earth has been carried down into the level ground below. In front of the front wall of the stage building is a step descending towards the orchestra; but as the orchestra is still some four or five feet lower, it will be most interesting to see what more is to be found here. At present wherever the trenches approach this level they are filled with water, and consequently great delay has been caused; but a drain has now been dug through to the river, and we hope this difficulty will soon be removed. The same cause has prevented the front row of seats from being completely cleared, and only the top of it shows above the water at present. It consists not of a row of chairs, as at Athens, but of continuous benches, with arms only at the ends. The most interesting point is that the back of these benches, wherever as yet visible, contains inscriptions, and has evidently served as a record for the history of the theatre and other matters; we have thus only to clear the whole row to get a rich harvest of inscriptions. Whether there are also inscriptions on the lower part of the seats, as at Athens, cannot be discovered until the water is drained off.

Altars.—"Two altars also have been found, one to the east, one to the west of the theatre; that to the west is of considerable length and is ornamented with metopes, thus confirming a theory of Dr. Dörpfeld as to the altar of Zeus at Olympia. Pausanias mentions two altars in this region, one to Herakles and one to Ares; but, as yet, there is no evidence to justify an identification.

Burial Mound.—"A trench was dug into a tumulus on the north bank of the Helisson (probably the same as that described by Pausanias as the tomb of Aristodemus) to which local tradition ascribes fabulous hidden treasures. Only a few inches below the surface was found a cylindrical marble urn containing bones (bearing marks of fire) and a gold diadem

and disc, which on close examination were found to be not prehistoric, as was at first supposed. The ornament on the diadem is not distinctive, but may very well be late-Greek; and the disc, which is hollow, seems to be made by pressing a thin plate of gold against the two sides of a coin, which are thus very faintly reproduced; on one side the type of an eagle on a thunderbolt can be recognized, with an indistinct inscription underneath. A little deeper in than the marble urn was found a curved wall, which looked at first like the retaining wall for a heaped-up tumulus; but it proved to be of much smaller diameter, and only to occupy a small portion of the mound: it apparently was the remnant of a circular vaulted tomb; but the stones were small and bedded in lime mortar. Inside, nothing was found but a lamp of later Greek shape, an iron strigil, and some rough vases. It is, of course, possible that earlier tombs may lie deeper, or on the other side, and so we are still continuing our work. In later times numerous burials took place here, as is shown by many rough tile-coffins and bones."—*Athenæum*, April 19, May 10.

Messrs. Loring and Woodhouse, members of the School, write under date of May 12 on the continuation of excavations at the theatre (*second site*): "(1) The drainage of the Theatre has been completed. (2) The digging of a magnificent horseshoe trench has laid bare the entire outer edge of the orchestra with the lowest line of seats. These seats are of a kind superior to the rest. They are long benches, nine in number, one corresponding to each *κέρας*, or wedge, of the auditorium. Each is provided with an arm at either end, and they have high backs, slightly curved, and fitting most comfortably to the back. These benches are separated by eight gangways, leading to the *κλίμακες* above, and there is also a *κλίμαξ* at either end; thus (below the *διάζωμα*, at any rate) the number of *κλίμακες* is ten. Below these benches (*θρόνοι*) is an *όχερός*, or channel to carry off the water, and beyond that a raised stone border bounding the orchestra. All these are in almost perfect preservation. The stone border reminds one of that at Epidauros, but, while that at Epidauros is circular, the circle at Megalopolis is incomplete, extending only so far as the horns of the auditorium on either side.

"The greatest interest, however, attaches to the *θρόνοι* at the bottom, all of which are inscribed. (a) On the easternmost is the inscription *Ἀντίοχος ἀγωνοθετήρας ἀνέθηκε τοῖς θρόνοις πάντας καὶ τὸν όχερόν* (the *όχερός* mentioned above), in characters which may well belong to the beginning of the third or even to the end of the fourth century. The first three words of this inscription are repeated on the central and westernmost seats. (b) The five central seats are inscribed with the names of Arcadian tribes to which they were appropriated, in very large letters. The names, read from east to west, are *Μαιναλίων*, *Λυκαίων* (cf. Paus. VIII. 27. 4. *Λυκαίωνται*), *Παρρα-*

σίον, Παριάτων, Ἀπολλων[ία]των. These names are in very late characters; but the inscription Ἀντίοχος ἀγωνοθετήσας ἀνέθηκε on the central seat, in comparatively early characters, in combination with the late inscription φυλῆς Παρρασίων, proves that the latter was an addition made since the seats were placed *in situ*. All these inscriptions are on the front of the seat-backs, facing the orchestra. (c) On the *hinder* side of the seat-backs are further inscriptions, apparently of intermediate date. Some of these we have not yet transcribed, as they are only partially cleared. That on the back of the seat inscribed Παριάτων is Παρίας; but the same correspondence does not prevail throughout.

"We propose next to dig a trench right through the orchestra from the central bench to the centre of the stage buildings. This will give us a complete section of the orchestra, and will expose the *θυμὴ* if that remains *in situ*. Probably we shall also extend this trench upwards, so as to obtain a perpendicular section of the auditorium."—*Athenæum*, May 31.

MEGARA.—The Archaeological Society have recently been making excavations on the site of a small shrine a few miles to the west of Megara.—*Ἀρχ. Δελτίον*, Nov. 1889.

MYKENAI.—WOOD-BEAMS IN STONE ARCHITECTURE.—Mr. H. Arnold Tubbs takes occasion of Dörpfeld's notes in reference to the late discovery at Mykenai—that the walls are constructed with a balk of timber in between the courses of squared stone (*Berl. phil. Woch.*, Nov. 2, 1889)—to contribute some remarks to the *Classical Review* of February, 1890. He calls attention to the fact that Pliny (*NH*, xvi. 79) states that the cedar-beams in the walls of the Apollo temple at Utica had lasted down to his own time. He states that in Africa and Palestine the use of wood-beams in alternation with stone was an introduction of the Phœnicians, who may also have influenced Greece and Lykia. He infers that, when the *Talmud* alludes to a distinctive Phœnician style of architecture, the main distinctive element may be the employment of cedar-beams.

OLYMPIA.—*Restoration of the eastern gable of the temple of Zeus.*—We will here simply call attention to the thorough and important work on the eastern gable of the temple of Zeus published in the *Journal of Hellenic Studies*, 1889, pp. 96–116, pl. vi. A summary of it will be found under the summaries of periodicals. He attributes the gable not to the Athenian Alkamenēs who executed the Nikē, but to the elder Alkamenēs of Lemnos who is the author of the western pediment and probably sculptured the eastern between 480 and 457. This new restoration by Six is approved by Kékulé and partly antagonized by Treu.—*Cf. Revue Arch.*, 1890, pp. 266–7.

PATRAI.—Near Patras a richly-sculptured sarcophagus has just been discovered. The basrelief represents a wild-boar hunt, in which are seen the

huntsmen divided in two groups, seven of them being without beard and one bearded. This last is in the act of stopping a boar, running at full speed, and has his left foot on the snout. The rest are pressing forward to slay the animal with hatchets and arrows. Another boar is seen making his escape in the opposite direction. On the sides of the sarcophagus are bas-reliefs representing on one side two prostrate bodies and a dog, and on the other a bull with an owl on its back. The work is highly finished and of the Roman period, but very probably copied from an original of Hellenic workmanship. Inside the sarcophagus was found a skeleton.—*Athenæum*, Feb. 22.

PLATAIA.—EXCAVATIONS BY THE AMERICAN SCHOOL.—Dr. Waldstein finished his excavating work at Plataia in the second half of March. The members of the Archæological School at Athens who assisted him there were W. J. Hunt, H. S. and C. M. Washington, Shelley, H. T. Hale, and J. F. Gray. Their first object was to make an accurate map of the ancient city of Plataia, so far as it is now visible. The site has been thoroughly surveyed; the walls, which are over two and a half miles in circumference, have been measured; and the publication of the results will place them at the service of all classes of students. A careful paper on the topography of the battle-field of Plataia has also been prepared by Mr. Hunt, and will be illustrated by a new map drawn by Messrs. Hunt and Hale. Dr. Waldstein carried on other excavations at several points within and without the city-walls, but without discovering, as yet, one of the three important temples (Athena, Hera, Demeter). In the course of the excavations some interesting inscriptions were encountered. Last year, Dr. Waldstein found at Plataia fifty-four lines of the Latin preamble to the famous Edict of Diocletian, *De Pretiis Rerum Venalium*. About half a mile from the scene of this find was discovered another slab, of about the same dimensions and in the same form, of the body of the edict in the Greek text, and it appears to be likely that the preamble was given in the Latin originally, whereas for the use of the people the text itself was published in Greek. The portion of the price-list contained in this tablet is the one dealing with the price of textiles. A part of it is published and known from other fragments, but there are interesting variations even in this part. A column and a half of the prices here given has hitherto been unknown, and supplies the beginning of the eighteenth chapter in Waddington's edition, hitherto wanting. Another inscription records dedications on the part of women to a goddess, probably Artemis or Demeter, and contains a large number of interesting feminine names. Dr. Waldstein intends to complete his excavations at Plataia next season.—*N. Y. Nation*, May 8.

TEGEA.—AN ARCHAIC SEATED STATUE AND TWO SANCTUARIES.—In the last number of the *JOURNAL* (v, 4, p. 493) an archaic statue of tufa

was referred to as having been found at Tegea. It is illustrated in the *Bulletin de Corresp. hellénique* for March-April (pp. 382-4) by M. Bérard. Pausanias (VIII. 54. 5) says that, on the road leading from Tegea to Argos, there existed in a sacred oak-grove a temple of Demeter ἡ Κοπεῖστρις, and, not far off, the *hieron* of Dionysos Mystes. These two sanctuaries were found by M. Bérard east of Hagiorgitika, near the church of Hagia Trias. There remain two small square basements ruined down to the ground, with foundations of large blue calcareous stones. One measures 3.50 by 4 met., the other 5 by 6 met. The larger is the temple of Demeter. Here was discovered the archaic statue, illustrated on pl. XI of the *Bulletin*, now in the Central Museum at Athens. The face is completely gone: the hair, tightly bound near the top of the head, descends in three masses on the shoulders and back—on each shoulder are four bands, while eight fall down the back. The bust is very wide at the shoulders and very narrow at the waist, forming a triangular shape. The hands rest on the knees, the statue being seated, the arms are uncovered and detached from the body. The drapery consists of a long tight tunic over which a mantle is thrown. The statue was painted, but has been washed by the rain. Another statue of the same type had been already found not far from Tegea, on the road to Megalopolis, at the Khanj of Franko-Vrysi (Εφ. Ἀρχ., 1874, pl. 71; *Cat. of Cent. Mus.*, Athens, No. 6). The latter is a simple xoanon, of common marble, hardly sketched out, while the statue of Hagiorgitika, though still retaining certain conventionalities of the most archaic art—as, for example, a horizontal plane for the thighs and a vertical plane for the legs—shows an advanced art in the bust, especially in the detaching of the arms from the body. The essential characteristic of the statue is its Egyptian style, shown especially in the arrangement of the hair and the form of the bust. Herodotos mentions a tradition according to which the worship of Demeter was brought from Egypt to Argolis and from Argolis to Arkadia. It seems admissible that the statue of Hagiorgitika is not the work of a native school, but of the early school of Argos, and was imported thence to Arkadia.

TROEZEN.—The French School have commenced excavations on the site of Troezen, in Argolis, opposite the island of Poros.—*Builder*, April 12.

TRIKKALA.—A sepulchral stele has been found here. Its inscription shows several verses in elegiac metre.—Ἀρχ. Δελτίον.

VOLO.—THE BYZANTINE CHURCH (*cf.* vol. V, p. 495).—The 250 Byzantine coins discovered in the foundations were of Alexios Komnenos (XII century). The altar has been uncovered, and as much of the church as serves to show that it had a width of about 25 met., and a length of about 50. *Débris* to a depth of 2 m. cover most of the foundation, so that a complete

excavation can not be made without much time and expense. Interest, of course, centers in the great size of the church and not in the few details that remain of its artistic decoration. The walls that remain are made up of rather large stones, and between these are often placed layers of tiles. Two tombs have been opened within the building, but were found to contain only the skeletons. Other tombs are at present in sight, some made of brick and others of stone slabs. The work of excavation is being very carefully conducted, and such is the interest in it that the municipal board has voted 3000 drs. as aid toward a complete uncovering of the church.

—*Ἀρχ. Δελτίον*, Oct.-Nov., 1889.

ITALY.

PREHISTORIC AND CLASSIC ANTIQUITIES.

BOLOGNA=FELSINA.—**ARCHAIC ITALIC NECROPOLIS IN THE BENACCI-CAPRARÀ PROPERTY.**—Professor E. Brizio publishes in the *Notizie degli Scavi* (1889, pp. 288-333) a very full Report on the excavations carried on near Bologna during 1887 and 1888 in the archaic necropolis on the Benacci property, now Caprarà. His introductory sentences are worth quoting: "The necropoli of the Villanova type, although studied during the last few years under new aspects and from a broad comparative standpoint, are not yet sufficiently known in all their details. Especially is it a fact, that the questions regarding the people who made them, still await a solution. They were at first attributed to the Etruscans; then to the Umbrians or Italics; then again to the Etruscans; and, finally, again to the Umbrians. The latter opinion was reached through excavations carried on in 1883 in the Arnoaldi property near Bologna, where it was found that the really Etruscan tombs of the Certosa type were distinct from the Italic tombs, not only archaeologically, that is by containing a totally different apparatus, but also topographically, there being between the two series an area 56 met. wide in which there was no trace of burials. The Italic necropolis was, besides, limited on the west by a ditch 2.50 met. wide. Now all conscientious students admit that at least in the region of Bologna the necropoli of the Villanova type belong to the Umbrian or Italic population.

"But now another question raised during the past ten years is being debated: whether this Italic population to whom we owe the tombs of the Villanova type is or is not the same which at a preceding time had occupied the *terremare*. Very evident differences, topographic as well as archaeologic, between the two types seemed to render the supposed ethnographic affinity extremely doubtful. To give but a single fact—in the vast region comprised between the Panaro and the Trebbia, a region very

rich in *terremare*, not a single necropolis of the Villanova type has appeared, while they abound in the Bolognese province where there are relatively few *terremare*. But, on the other hand, it was rightly observed, that the most archaic tombs of the Villanova necropoli near Bologna had still to be examined, and that, until they had been, any judgment would be premature."

If the population of the *terremare* are but an earlier stage of that whose necropoli are of the Villanova type, there must be a phase that should act as a progressive missing link, a bond of union—otherwise the populations must be different. Apparently, it was with the view of solving this most important among the ethnographic questions relating to early Italian civilization that senator Gozzadini initiated the excavations of the Benacci-Caprarà necropolis, where it was thought that the most archaic tombs existed. The excavations were begun in May 1887: in the same month Gozzadini died. Professor Brizio then took his place, and his report has been delayed by the necessity of first restoring and recomposing the material. The following peculiarities of position were noticed. (1) From the present level to a depth of between 1.50 and 3 met., were remains of Roman habitations almost everywhere. (2) At the depth of between 3 and 4 met., were remains of Gallic tombs extending from Strada S. Isaia thirty metres toward the interior. (3) From the point where the Gallic tombs ceased up to the end of the cut, at a depth of between 3 and 5 met., were Italic cinerary tombs, sometimes with skeletons, though these are usually in the upper part of the stratum.

The most important fact noted in connection with the Gallic tombs was the presence in one of them of four vases exactly like others found in Italic tombs of a late period in the Benacci as well as in the De Lucca property. They seem to have been originally placed there, and this is the first instance of vases peculiar to Italic tombs being found with others of the Gallic period. In connection with this fact is another of equal importance regarding the Italic necropolis which immediately followed and almost dovetailed into the Gallic. During the excavation no division or line of separation was noticed between the two sepulchral fields, and even the eleventh section, in which was the Gallic tomb last described, contained also several Italic tombs at about the same depth. Sixty Italic tombs are described in the Report, but no general conclusions are drawn: these are reserved until a further Report on the closing excavations. So far as can be judged from a description of the objects thus far found, (1) they present no support whatever to the theory of the unity of race; (2) all the types are those of the Villanova period, in their early forms.

A description of *Tomb XXXIX*, the richest of all, will give a good idea of the better class of these tombs. It was at a depth of 4.40 met., was

surrounded by many river-pebbles and surmounted by a large stone used as a stele, 80 by 57 cent. It was square, measuring 2.30 met. each way, and contained numerous and varied objects in terracotta, bronze, iron, bone, wood, and amber. (1) A bronze ossuary, Villanova type, in small fragments, 54 cent. high, 40 cent. in diameter, with two handles resting on a conical foot. The cover nailed to the top after the insertion of the ashes was not the original cover of the vase, which lay by its side. This ossuary is interesting for its technique. It consists of three parts: the upper cone, the lower cone, and the foot. The two cones overlap and are joined by nails with conical heads. The foot, also conical in shape, is soldered to the base. These cones are not of trapezoidal sheets whose oblique sides are overlapped and hammered down and nailed, but they are made of sheets produced by firing. This process in monuments of so early a date is surprising, as the *situlae* found in the same tomb, though much smaller and of easier technique, not only consist of trapezoidal sheets nailed down but have a bottom of a separate piece also nailed. (2) An almost spherical cup, with a large opening and a conical foot, formed of two spherical sections nailed together, and with two handles from which hang pendants. (3-4) Two *situlae* with a double semicircular handle, mentioned above. (5) A spherical bronze cup, formed of two hemispherical caps, with a decoration of two bird-heads on the sides, a cover surmounted by a double bird-head, and a conical base. (6-7) Two *cupedunculæ*, each formed of a hemispherical cap of bronze to which a strong handle is nailed. (8) Fragments of bronze belonging to a couple of bronze cups decorated with incised meanders and triangles. (9) Fragment of a *situla*. (10) A large *presentatio*, sustained by a conical foot with a circular basin in the centre, decorated over the entire surface with raised dots and with chains hanging from the edges. (11-16) Fragments of six slightly-concave circular disks, decorated with concentric circles hammered in relief. (17-20) Fragments of four horse-bits, two with smooth bar and two with twisted bar, and all with the same type of decoration as one published on pl. 1-2 by Gozzadini, *De quelques mors de cheval italiques*. (21-40) Twenty massive bronze rings which appear to belong to horses' harness. (41-46) Six bronze rings with a central cross-bar. (47-48) Two slightly-concave circular bronze plates, decorated with double serpentine lines and with concentric semicircles. (49) Beautiful bronze sword, the best preserved and of the earliest type of any yet found in the Bolognese necropolis: on the shape of the *antenna* joined by cross-pieces, cf. Soranzo, *Este*, tav. VI, and Mortillet, *Musée Préhist.*, pl. 81. It had a bronze scabbard. Then follow fibulae, pins, bone and ivory ornaments, bronze palstaves, knives, razors, buttons, cups, *skyphoi*, and other small vases.

ETRUSCAN STELA.—The *Nuova Antologia* of April 1 announces the discovery in the Margherita Garden, near Bologna, of an Etruscan *stela*, remarkable for some subjects represented on it not hitherto found on monuments of this kind: "The *stela* is sculptured on three sides. On the two principal faces occur, on the one the usual representation of the soul of the deceased borne to the under-world in a biga; on the other, the figure of a draped woman. The broad or transverse side of the *stela* is occupied by six carvings, five of which are subjects from Greek mythology. The first represents the monster *Skylla* with his legs terminating in the tail of a fish, and with a dagger in each of his uplifted hands. In the second, the witch *Kirke*, with a cup in each hand, has on one side a pig and on the other a man with a pig's head. In the third, a *Nereid* is seated on a *Dolphin*. In the fourth, a woman is seen rushing forward violently and grasping in her right hand a sword, perhaps *Kanake*. In the fifth is a woman with flowers in her hands, to whom it is difficult to assign a name. But the most interesting subject is that of the sixth compartment, where is seen a youth in sleeved tunic and with wings on his shoulders, in the act of flying. In his right hand he holds a hammer and an instrument like a carpenter's square; in his left hand he holds a strangely shaped saw."—*Athenæum*, May 3.

CAPRANICA.—ROMAN SARCOPHAGUS.—Near the road from Capranica to Vetralla, along a Roman road, an ancient tomb was demolished and within it was discovered a fine marble sarcophagus intact, with its cover: nothing was found inside it. The reliefs with which the entire surface is covered are in the best style of Roman art. The principal scenes represent the myth of *Theseus* and *Ariadne*. In the first scene, *Ariadne* is giving to *Theseus* the clew of thread to help him from the labyrinth; the central composition shows *Theseus* seizing the *Minotaur* by a horn and striking him; finally *Ariadne* is shown calmly asleep, while *Theseus*, fleeing, turns to look at her. On the sides and front are *genii* supporting garlands; on the cover are represented the games, in which winged *genii* drive in bigas to which are harnessed different animals—dogs, lions, bulls, boars—all aiming for the goal, and followed by a *genius* on a lion and one on a goat. The work is highly finished and the composition good.—*Not. d. Scavi*, 1889, pp. 358–60.

CASTELLAZZO DI FONTANELLATO.—EXCAVATION OF THE TERRAMARA.—The excavations of Castellazzo were referred to in vol. v. pp. 496–7. A full Report on them has been published by Professor Pigorini in the new *Monumenti Antichi* (vol. 1, No. 1) published by the *Accad. dei Lincei* under the title: *La Terramara Castellazzo di Fontanellato nella provincia di Parma*. He has also given a short note in the *Not. d. Scavi*, 1889, pp. 355–6.

The main object of the excavations was to ascertain whether this terramara had the characteristics of the other primitive Italic stations in the

Po valley; that is, whether it contained, within, the *palafitta* or foundation of piles enclosed by a rampart raised above the surrounding level, and around which was a ditch. It has been found to have the *palafitta* encircled by an embankment about 15 metres wide at the base, around which is a ditch having a constant width of 27 metres and a greatest depth, in the centre, of about 1.40 met. The station occupies a surface of 187,891 square metres, in the form of a trapeze with parallel eastern and western sides. Its greatest length is 641 met., its lesser length 537, and its width 319.

The number of objects found was small, as is usual in such stations; but there were a number of deer-horn, bone, terracotta and bronze articles, nearly all of which are illustrated in the publication of the *Lincei*. They confirm the opinion, already expressed by Professor Pigorini, that the arts and industries of the primitive Italiots present the same characteristics in all the *terremare* of the Po valley, and that the antiquities found in the *terremare* are exactly the same as those found in the lake-dwellings of the Venetian province, while they differ notably from those found in the lake-dwellings of Lombardy and Piedmont.

COPEZZATO.—NECROPOLIS OF THE BRONZE AGE.—In Copezzato, province of Parma (two kilom. from S. Secondo, along the bank of the Taro), countrymen had found for several years numbers of terracotta vases. Professor L. Pigorini was supplied by the Ministry of Public Instruction with funds to undertake excavations, which were commenced in August 1889. Their result was important, for they disclosed an extensive primitive Italic necropolis, or, to speak in the language of palethnography, a necropolis of the bronze age and of the people of the *terremare*. This necropolis of Copezzato has the same peculiarities that characterize the other few necropoli of a similar type found up to the present in Upper Italy, that is, those of Monte Lonato near Cavriana, and of Pietole Vecchio in the province of Mantova, of Boyolone in that of Verona, of Casinalbo in that of Modena, and finally of Crespellano near Bazzano in that of Bologna (*Bull. di palet.*, vi, pp. 182-92; vii, pp. 138-43). The earthen ossuaries, hand-made, baked but little or not at all, do not differ in the least (either in form or in technic) from those of the *terremare* of Emilia or of the sub-Alpine *palafitte* of the east. They lie in the earth, near one another, and contain burnt human bones, above which, in the ossuary, a small vase is usually placed.

An examination was made, along the left bank of the Taro, to find the station of the inhabitants of the *terremare* who executed the tombs. But the search was fruitless. Professor Pigorini thinks it must exist on the right bank, which he expects to examine during the coming summer.—*Not. d. Scavi*, 1889, pp. 287-8.

CORNETO=TARQUINII.—EXCAVATIONS IN THE MONTEROZZI REGION.—

Professor Helbig reports the continuation of the excavations the beginning of which, in the Monterozzi region, was noted in vol. v, p. 383. A few tombs were opened in May 1889. The most interesting was a *tomba a camera*, found intact, placed 100 met. s. w. of the *tomba delle bighe*. Its sarcophagus contained the remains of an unburnt skeleton, without any ornaments, and on its cover was the usual reclining figure, representing a man of about thirty, on which are still visible the remains of the original polychromatic decoration. Another body was placed on a bench, and around it were grouped many objects, such as three bronze plates; a bronze *orcio* and three *thyriateria*; some painted terracotta masks, one of which is decidedly comic, a second representing a Sellenos type; a number of pieces of common Etrusco-Campanian ware; etc.

At a distance of about 20 metres was a tomb with a roof *a schiena*, which had been excavated at a recent date. In the earth was found a fine scarab (oriental onyx) engraved with great delicacy. The figure represented is that of a nude bearded man, whose head is covered with a *pileum*, leaning with his left hand on a stick, and with the pincers which he holds in his right raising from the ground an oblong object. The inscription reads *Sathlans* (or Vulcan), and it is interesting as giving the word in a more archaic form than usual.

In a third tomb of similar character, also devastated, were found the fragments of a black-figured Attic amphora of sufficiently good design.—*Not. d. Scavi*, 1889, pp. 335-7; cf. 1890, pp. 28-9.

GERACE=LOKROI EPIZEPHYRIOI.—Further reports have come to hand concerning these excavations (see v, p. 497). Dr. Dörpfeld visited the site from Athens, and, on his return, gave an account of the excavations to the German School. Dr. Petersen also reported on them twice before the German Institute in Rome. The most important recent addition is the uncovering of the foundations of an archaic temple over which the Ionic temple was built.

THE IONIC TEMPLE.—In Dr. Petersen's first report, in December, he says: "The excavations, commenced early in November, gave the following results. The Ionic temple, erected on the customary three steps, was hexastyle, with seventeen columns on the long sides, with a pronaos and an opisthodomos *in antis*, and measuring, on the upper step, 17.34 met. in width and a little more than 43 and a half meters in length. The solid and exact construction of the western stereobate and stylobate, which alone remain *in situ*, indicates the best Greek period. The columns, of which only scanty fragments were found, seem to have been composed each of four drums of nearly equal height, and resemble, in the form of their bases, those of the temple of Hera at Samos, in the anthemion under the

capital, the columns of the Erechtheion at Athens, but even more certain fragments of the archaic temple of Naukratis; and the Lokrian capital, also, in two characteristics cannot be paralleled by any other so well as by a capital at Samos. The base of the column with a round plinth and a torus, of proportionate measurements, respectively 0.350 and 0.175 met. high, seems to give the key to the metrologic system, and thus the width is the centuple of the first measure and the cinquantuple of the second.

"Almost nothing was found of the frieze and cornice, some fragments of the eaves and roof-tiles, a few of which bear mason's marks, the only written signs yet discovered. The group of sculpture found before the west front represents a triton who appears to have brought from the sea a youthful hero and his horse. The workmanship appears hardly earlier than 400 B. C. The opinion that this was not an akroterion but a pedimental group was sustained by the further discovery, to the right, of a few fragments of a corresponding group moving toward the left, while the first group faced to the right. Nothing has been found of the sculptures that must have decorated the east gable."

A second report was made by Dr. Petersen to the Institute on Jan. 10. He had visited Gerace in the meantime, where he was joined by Dörpfeld. Their joint labors, with those of Orsi, brought the excavations to a close. In regard to the metrologic question, Dörpfeld found that it was necessary to unite the two parts of the base of the column, which, together measuring 525 or 528 millim., gave the exact difference between the axis of the side and front columns, the centres of the former being 3.17 met. apart, those of the latter 2.64 met; this last measure being the quintuple, as the former is the sextuple, of the same measure. This unit of measurement he found to be the Samian cubit compared by Herodotos to the Egyptian cubit, calculated by Lepsius at 0.525 met. Of these Samian cubits, according to Dörpfeld, the Ionic temple of the Lokrians measured therefore 36 in width (lower step), 86 in length, 30 and 80 between the axes of the angle columns, 18 in the width of the naos, 9 in the width of the side porticoes, etc.

THE ARCHAIC TEMPLE.—There came to light remains of a very archaic temple, predecessor of the Ionic, of a slightly different orientation, of similar dimensions, that is of nearly the same width but of a lesser length. This also was in *antis*, hexastyle and peristyle, though a certain difference in construction and material raised the question whether the peristyle were not a later addition. Two pieces of the drums of columns and two fragments of terracotta slabs with painted decoration appear to belong to this earlier temple.

In his second report, Dr. Petersen says: "Some additional remains of the archaic temple were found; a part of the foundation of the west peristyle, the distance of which from the front of the naos is only about the

half of the corresponding distance on the opposite side (this west end being without propylæa *in antis*) ; then, also, a part of the east wall of the cella. Finally, at the southwest corner of this cella was found a basement which, from its position, seems to have supported the altar of the new cella, while another, not far distant, may have served as a base to the statue of the archaic cella."

After Dr. Petersen's departure, Dr. Orsi made a last effort to find the northwest corner of the peristyle which might be supposed to lie buried beyond the area of the new temple. He was successful. The west row, however, projects 3.86 met. beyond the fragment already found. This would indicate a double colonnade on the façades.—*Bull. Ist. arch. germ.*, vol. iv, 4.

TERRACOTTAS.—DR. ORSI has now terminated his work by the thorough examination of the heaps of broken terracottas, which appear to be as old as the original prehistoric temple. Two distinct groups of them were found outside the ancient city, and in part heaped against its walls, at the distance of about 300 met. from the Hellenic temple. The first heap occupied an area of about 50 by 35 met., and herein were found small vases (for the most part rude), some *pateræ*, some small *skyphoi* (decorated simply with black bands and with triglyphs round the rim), and some moderate-sized *hydriai*, but of rude construction. Some moulded architectural ornaments were also found, some having their reliefs touched with color, and a large number of votive *figurini*, which crumbled into clay from long exposure to the moisture. When entire, some of the latter may have been nearly two feet high, and the character they present is altogether archaic, based on hieratic motives. The greater part are figures of women with the *chiton poderes*, while figures, standing or seated, have symbols of Aphrodite, the dove and the pomegranate. Dr. Orsi thinks that these *eidola*, amongst which some probably represented the divinities of the catachthonic triad or of the cycle of Persephone, are anterior to the new temple, which he supposes built in the fifth or fourth century B. C. The second heap of remains consists of large rectangular trenches, faced with tiles, within which thousands of *skyphoi* were placed in rows, one inside the other. Perhaps some ritual character must be given to this strange occurrence. This part of the ground was closed on the east by an Hellenic wall of good construction. On the north was found a well with the rim made of bricks, probably sacred, and in this well, which was not very deep, were found some fifty coins of the Roman Empire, dating from the first to the third century, the oldest being at the bottom.—*Athen.*, May 24.

INTRODACQUA.—**PELASGIC WALLS.**—In his researches concerning the stations of primitive populations in the Abruzzi, Professor De Nino found some very early walls on a hill east of Introdacqua. The hill is almost circular in shape at the summit, and is surrounded with a primitive

"Cyclopean" wall. The diameter of this circular eminence is 74.24 met. Around it is an earthen platform, 8 feet wide, in the shape of a perfectly circular crown; within it there is a slightly convex space. An entrance can be still traced at the south: its width is 1.80 met. To the north of this hillock, at a distance of 52 met., are remains of other constructions also arranged in circular form and parallel to the upper wall. A piece 36.50 met. long has been uncovered.—*Not. d. Scavi*, 1890, pp. 45-6.

LOGRONO.—ROMAN VILLA.—Col. M. de Echarrri has recently unearthed, in the neighborhood of Logrono, the remains of a rich Roman villa. The first excavations brought to light two fine circular mosaics, six metres in diameter, in which figures of men and animals are charmingly designed. Two more mosaics were afterward found, and the excavations are continuing. The buildings show traces of destruction by fire.—*Revue Arch.*, Jan.-Feb., 1890, pp. 131-2.

MARZABOTTO.—AN ETRUSCAN POMPEII.—Reference was made in the last number (vol. v, p. 497) to Professor E. Brizio's excavations at Marzabotto to prove that it was not a necropolis but an Etruscan city. Since then, Professor Brizio has published a popular account of the results of his work in the *Nuova Antologia* (Jan. 1) and a scientific and full report in the new archaeological publication of the *Accad. dei Lincei* (vol. i, fasc. 1).

PLAN OF THE CITY.—It was already known that the Etruscan city whose ruins remain at *Pian di Miano* near Marzabotto in the province of Bologna was exactly divided into four quarters by two great straight roads, one running from east to west, the other from south to north, crossing one another at right angles in the centre of the city. The point of contact of these two streets no longer remains, because the long and violent action of the river Reno, on which the city is placed, has removed more than half the ground originally covered by the dwelling-places. The recent discoveries have disclosed a second street running from east to west, exactly parallel to that already known and situated 165 metres to its right. It seems, therefore, probable that there was a third street running in the same direction on the left of the centre, and that it has been destroyed by the waters of the Reno. There appear, then, to have been three great *decuman* streets, as they were termed, intersected by the one *cardinal* street, from north to south, thus dividing the city not into four but into eight regions. No other broad *cardinal* street was found beside that just mentioned: only a large number of narrow streets running parallel with it. The broad *cardinal* and *decuman* streets are each fifteen metres (50 ft.) wide, while the smaller streets measure hardly five metres, one only reaching a width of six metres.

The minor streets and the great *cardinal* road, intersecting the *decuman*, formed the *insulae* or blocks, eleven of which were traced during the

recent excavations. Although none have been entirely excavated, enough is known to disclose their form and extent. It was found that all the *insulae* or blocks comprised between the central and right-hand decuman streets were 165 metres long with a width sometimes of 35 sometimes of 40 metres: there are four of the former and two of the latter. One block measures 165 by 68 metres and appears to be a double block. All are quite regular and perfectly rectangular. This regularity of streets and blocks in the Etruscan city is certainly surprising, but this characteristic is found also in some of the Roman colonies whose plans are known, such as *Acsta* (*Augusta Praetoria Salassorum*), *Concordia Sagittaria*, and *Turin* (*Colonia Julia Augusta Taurinorum*). This same regularity in the Roman colonies is a convincing proof that the Etruscan city near Marzabotto was a real colony, built at one time, on a preëstablished plan, and according to the norms prescribed by the Etruscan ritual-books for the formation of colonies, which norms were afterwards adopted and followed by the Romans. Although writers have admitted that the Romans borrowed from the Etruscans their rules for founding colonies, no monumental archaeological proofs of the fact had been discovered, as the Etruscan cities and colonies whose plans were known had suffered radically from successive transformations. But the Etruscan colony near Marzabotto, having been for some reason abandoned by the Romans, has preserved its Tuscan type unaltered. It enables us to obtain a clearer view of the advanced civilization reached by the Etruscans when in the fifth century B. C. they colonized the region of the Po. For there can be no doubt that this city—of a name still unknown—is one of the colonies which the Etruscans, as Livy tells us, sent into the valley of the Po after having founded and extended their dominion along the Mediterranean. This date is confirmed by the study of the objects found, especially the Greek painted vases taken from the tombs, which show that the city existed in the second half of the fifth century B. C.

Of the fifteen metres that formed the total width of the main streets, five were given up to vehicles and the rest divided equally between the two sidewalks. At the street-corners, and sometimes in the middle of the blocks, rows of high large stones, smoothed on top, were placed across the street in order to make it possible to cross it dry shod in time of rain. A similar arrangement has been found at Pompeii. The carriage-way was paved entirely with large and small pebbles strengthened here and there with larger stones, according, in fact, to the system that was later perfected by the Romans. Between the sidewalks and the buildings were large ditches for surface-drainage, 80 cent. wide and of varying depth; according to the level, varying from 60 centim. to two metres and 30 centim. The differences of level found in all the streets, both large and

small, prove that the drainage ran to the west on one side, and to the south on the other, the water being collected so as to drain into a large *cleaca* to the west of the city. All this attests a very complete system, such as the Romans also applied. The walls of these uncovered drains are built of pebbles without cement strengthened at times with great blocks of tufa and travertine where the pressure was greatest. Such pressure as was provided for must have been caused by heavy stone walls. There are strong arguments in favor of a belief that the Etruscans used, in their private dwellings, walls formed of parallelopiped blocks of travertine or tufa.

ETRUSCAN HOUSES.—The most notable result of the recent excavations has been the discovery of some Etruscan houses which correspond so admirably in plan to the Roman houses that we are forced to conclude that the Romans derived from the Etruscans the type of their dwellings. The Etruscan house was usually surrounded by shops, remarkable for their size and regularity, facing on the principal streets, and which we may fancy to have been filled with attractive works of art and industry. In the richer houses these shops communicated with one another and formed an integral part of the house, as at Pompeii, and in these cases it is probable that the owner used them for the sale of his own property or produce. Some houses are simple and modest, others larger and more sumptuous: the latter have been so transformed as often to render difficult the reconstruction of the primitive plan, which is best shown in the simpler edifices.

One of the houses discovered includes an entire block or *insula*: its length is not yet determined, but its width is 35 metres. It fronts on the central decuman road and is built with great accuracy. All its foundation-walls are strengthened at the corners with a large travertine block. The entrance—surrounded on both sides by large shops, back shops and storehouses—consists of an imposing vestibule 4 metres wide and 17 long, paved with minute pebbles, and leading into a grandiose atrium 27 met. long by 10 wide. This atrium was uncovered and also paved with minute pebbles, crossed diagonally by a little gutter to carry off the rain-water. At one corner was dug a well from which were recovered many objects, including a slab with an Etruscan inscription which showed that the name of the owner was *Lordumnio*. A terracotta puteal surrounded the mouth of the well: it was decorated in relief with a row of fishes playing in the water: within were numerous ridges made by the friction of the rope in drawing up the full bucket. This puteal is the earliest that has been found.

This atrium or court is surrounded on the west by three large rooms, each measuring 6.80 metres square: they must be bedchambers (*cubicula*), for such were the rooms occupying a similar position in Roman houses. The three bedchambers are followed by another large hall which is remark-

able for being open, that is, for having no front wall. It reminds of the *alae* in the houses of Pompeii, also in this position, which were the place for the images of the ancestors. North of the court, facing the entrance, is another room, also open and flanked by a corridor. It corresponds exactly to the *tablinum* of the houses of Pompeii, where the family archives were kept. This constitutes the front of the house. But other rooms and walls flanking the *tablinum* have been brought to light, as well as a second uncovered court placed immediately behind the *tablinum*. All this must have formed the rear of the house, a sort of peristyle, the invention of which, according to Diodoros Sikelos, is due to the Etruscans. It was a place of retirement from the noises of the street.

ORVIETO.—NORTHERN NECROPOLIS.—The excavations in the northern necropolis have yielded but little material. Traces of some tombs of the VII cent. were found. Sept. 2-8, was opened, at a depth of 4.10 met., a tomb with one chamber, which had been more than once despoiled. But its style and construction, which differ from the known types of the necropolis, give it a peculiar interest. It is in the form of a truncated cone, and is in part cut out of the mass of tufa and in part built of large blocks of the same material without cement. It is closed at the top by two large blocks, placed horizontally, each 1.55 met. long and 0.54 met. wide. Its measurements are $2.30 \times 2.05 \times 1.52$. It contained a large and a small bench: of interest is a small tufa cushion slightly inclined, in which are cut two small semicircular hollows for the heads of the deceased. The tomb is protected by a surrounding circular wall of great masses of tufa.—*Not. d. Scavi*, 1889, pp. 358-9.

PARMA (province of).—PREHISTORIC REMAINS.—Dr. Strobel sums up his recent investigations concerning the prehistoric remains in the province of Parma, belonging to the period of the *terremare*. They are interesting as changing somewhat the current ideas in regard to the classification of the *terremare*, and they prove that the *terramaricoli*, or inhabitants of the *terremare* left in the province of Parma remains of villages, camps, and cemeteries.—*Bull. Palet. Ital.*, 1889, Nos. 9-11.

POMPEII.—DATE OF THE ERUPTION.—On account of the discrepancies in the manuscripts of Pliny and other writers, the exact date of the eruption that destroyed the city has been a disputed question, some holding it to have taken place on August 24, others on November 23, of 79 A. D. The question appears to have been unexpectedly decided by a recent discovery. Outside the Porta Stabiana, in October, there was found the impress, in the ashes, of three human bodies and of a tree: of these a successful impression in plaster was taken. Of the tree there remained the impress not only of the trunk but of the leaves and fruit, some remains of which were still in place. The tree was found to be a kind of laurel, the

laurus nobilis, of the variety with circular fruit which ripens only in November. Professor Pasquale has made a very accurate study of these interesting remnants, and proves, beyond a doubt, not only the identity of the tree but the ripeness of the fruit at the time of the catastrophe. This appears to settle the question in favor of November as the date of the eruption.—*Not. d. Scavi*, 1889, pp. 407-10.

ROMA.—RESIDENCE OF THE ROMAN DENDROPHORI OF KYBELE AND ATTYS. AND THEIR SANCTUARY.—The excavations on the Coelian in what was the rear part of the Villa Casali, now occupied by the great buildings of the new military hospital, have led to a discovery of unusual importance which it is hoped will be soon completed. They have brought to light, apparently, the ruins of the residence of the Roman *Dendrophori* (or *δενδροφόροι*). Of this band of worshippers, bearers of trees in the sacred pomps of the Phrygian worship, almost no memory has been preserved among the monuments of Rome, though the worship, which was so wide-spread, had become established in Rome with all its festivals and mystic ceremonies at least as early as the times of Claudius and Otho, and maintained itself there vigorously up to the fall of paganism, as is shown by numerous epigraphic monuments, among which are the Vatican altars.

The part hitherto discovered consists of a rectangular hall, as yet only half excavated, 3 met. by 2.50 met., whose walls are poorly built of brick and whose pavement consists of a mosaic of black and white cubes. This mosaic includes a number of figures of animals and birds, while one side is occupied by an inscription, also in mosaic, which reads: INTRAN-
TIBVS·HIC·DEOS | PROPITIOS·ET BASILICAE | HILARIANAE.
Hence it appears that this hall served as a passageway to the basilica called Hilariana. Placed against the left wall, still in place, was a large marble base with this inscription: M·PUBLICIO HILARIO | MARGA-
RITARIO | COLLEGIUM DENDROPHORYM | MATRIS DEVM M·I·
ET ATTIS | QVINQ P·P·QVOD CVMVLATA | OMNI ERGA·SE-
BENIGNITATE | MERVISSET CVI STATVA AB EIS DECRETA
PONERETVR. This base is 1.28 met. high and 96 cent. wide. The fourth and fifth lines read: *Matris Deum Magnae Idææ et Attis, quinquen-*
nali perpetuo. The good style of letters and language, and the form *Publi-*
cus in place of *Publicius*, show that this monument is not later than
Hadrian, and might be even earlier were it not that the head of the statue
that surmounted it is bearded. This inscription leads to the belief that
another, found long ago, came from the same building: it is a dedication
to Silvanus by the same Publicius, and reads (*CIL.*, vi, 641): *Sylvano·*
Dendrophoro sacrum | M. Publicius. Hilarus·margax qq pp cum·liberis |
Magno et Harmoniano·Dendrophoris M D M de suo fecit. This second
inscription was doubtless placed in a niche containing a statue of Silvanus,
who, as a forest-god, would be a natural prototype of the *dendrophori*.

Publicius Hilarianus was, evidently, the principal benefactor of the society: he built the basilica attached to its residence, and perhaps the entire building, and adorned it with sculpture. To him, in gratitude, the *dendrophori* erected a statue. Of this statue only the head has yet been found. It represents a man of about forty with short and curly beard and hair, heavy overhanging brows, and large eyes full of intelligence. As a work of art, it is good, and as a portrait strikingly true to nature. Opposite the base of this statue stood a small substructure which appears to have sustained the graceful figure of a youthful satyr, holding a lizard, seated on a rock which served to decorate a fountain (see below). On the door-sill are marked, more in *graffito* than hollowed out, four foot-prints, two turned forward and two backward. Such foot-prints have been found on several stones but never before *in situ*. They seem to indicate the way of going and of returning, the *itus reditus*.

The mosaic-pavement is of peculiar interest. It contains a group of symbolic animals and birds, grouped in a circle around a centre formed of a lance stuck through a wreath on which is perched an owl, which appears to be a symbol of Kybele. The surrounding animals are: two lions (or rather lionesses), a bull, a scorpion, a he-goat, a deer, a serpent, a crow, and a dove resting on a laurel-branch. All these must have a significant place in Phrygian symbolism, though this meaning is known only for some of them, such as the scorpion, lion, crow, bull.

The excavations were again taken up early in the spring, and resulted at once in the discovery of a staircase of twelve steps at the east end of the ante-room, which evidently led to the basilica Hilariana. A part of the basilica itself was then uncovered, with a portion of its pavement containing geometric figures in mosaic. Ancient devastations and modern excavations had ruined it.—*Bull. Comm. arch.*, 1890, pp. 18-25, 112, etc.

WORKS OF ART DISCOVERED IN 1889.—As usual, the December number of the *Bullettino della Commissione archeologica comunale* contains a complete list of the works of ancient art discovered during 1889 by the archaeological commission. The greater part of the large works that present a special interest have been already enumerated in the JOURNAL. Among those that should be added are, however, the following. (1) Elegant headless statuette of a youthful satyr, seated on a rock that served to decorate a fountain: it has lost both arms and the right leg, but the left hand remains, holding a lizard. (2) Female bust, life-size, representing a Roman matron; of good sculpture though of late date. (3) Head of an old man, larger than life, perhaps of the time of the Antonines. (4) Front of a sarcophagus representing a Bacchic triumph. Bacchus and Ariadne are embracing each other on a biga drawn by two centaurs and preceded by a winged genius on a lion. (5) A series of bronzes, including two

statuettes and a vase (*oreiuolo*) with reliefs. (6) Several fine terracotta antefixes and parts of friezes.

ROMAN TOPOGRAPHY.—In a recent number of the *Bull. Ist. arch. germ.* (vol. iv, No. 3) Ch. Hülsen contributes a long paper covering 65 pages giving the results of new discoveries and investigations relating to the topography of Rome made during the years 1887–89. Beginning with ancient, mediæval and Renaissance sources, he passes to publications which he divides into appropriate classes, and finally takes us on a *topographische Rundschau* or topographical tour through the city (beginning with the forum), in which literature and notes on excavations are blended. The summary is made all the more useful by numerous illustrations through the text.

ARCHITECTURE.—*Via Labicana: an ancient building.*—In the Vigna Marolda, along the Via Labicana, have come to light remains of a building composed of two distinct parts. The most ancient is built with masses of tufa with a double facing; the more recent, of walls of excellent reticulated brick covered with stucco painted in very bright colors. There are crypts, and subterranean vaults illuminated by loop-holes; fragments of monochromatic and polychromatic mosaics of enamel cubes; marble incrustations, and other decorations suited to a noble suburban residence. —*Not. d. Scavi*, 1889, p. 341.

The Cloaca Maxima.—The excavations in the Forum of Augustus favored the collection of standing water in that low section to such an extent that a plan for drainage was entrusted to the well-known engineer Pietro Narducci. He started in his investigations at the point mentioned by Salvestro Peruzzi, on the east side of the Forum Transitorium at the corner of the Via Tor de' Conti and the little church of SS. Quirico e Giulitta: *huc confluebant aquæ de vicinis montibus, æ Viminalis, Quirinalis et Esquilis—hic est magna cloaca quæ vadit ad fontem S. Georgii usque*. The section of the *cloaca maxima* that led to the Forum of Augustus was found and cleared, and became a discovery of the highest importance, for it is open to students along a length of about two hundred metres. Narducci writes on the newly discovered section: "This section has a certain historical interest, and this in connection with the church of S. Maria in Macellum Martirum, in the centre of which is a well of water that was drunk as holy because it was thought that in it had been washed the knives used to execute Christian martyrs. The writer has always been of the opinion that this well was a means of access to the *cloaca maxima*, and served, perhaps, to conceal the bodies of martyrs with the view of giving them honorable burial. This was supported by the clearing of the *cloaca* whose well remained dry: it was found that this well was constructed as a means of access, not at the primitive period but at the time of restorations under the Empire." This restoration is proved by the use of bricks over

a length of 60 metres, the original construction being of large blocks of *pietra gabbina* laid without cement. The *cloaca* passes on beyond the Forum of Augustus to the Suburra, but is there filled up.

The entire system of ancient drainage of Rome has been made the subject of careful study by Cav. Narducci, as is shown by the following works: *Fognatura della città di Roma sulla sinistra del Tevere*, 1884: *Sulla fognatura della città di Roma*, 1889: *Pianta delle principali fogne sulla sinistra e destra del Tevere, etc.*: *Roma Sotterranea, illustrazione della Cloaca massima*, 1889. There are, besides, some interesting articles just published: OTTO RICHTER, *Cloaca Maxima in Rom*, in the *Antike Denkmäler* for 1889: LANCIANI, *La Cloaca Massima*, in the *Bull. Comm. arch.* for April, 1890. Both are fully illustrated with plans and elevations.

Ancient Constructions in the Piazza di S. Crisogono.—The diggings in the Piazza di S. Crisogono in Trastevere, made for the construction of a water-reservoir, led to the uncovering of a section of ancient construction under the Via Lungaretta. It forms part of the ancient suspended road or viaduct constructed, after the fashion of the bridges, in large blocks of stone. It was built of large blocks of travertine in a style similar to that of the Servian Wall, and undoubtedly belongs to the early times of the Republic. It traversed the valley called by the Romans *Campus Codetanus* whose marshy ground filled with water-courses had to be passed to gain the declivities of the Janiculum; and it kept open the communications with the right bank of the Tiber. It is an interesting document for the ancient topography of the Trastevere. Such viaducts are very rare in ancient architecture.

The present one, after proceeding to the top of the *arx* of the Janiculum, probably joined the very ancient road to Maritime Etruria, afterwards called Aurelia. It also served as means of communication between the Palatine and Janiculan bridges. It may also have served as a means of defense for this zone of the city, as its course seems to correspond with that of the northern side of the Servian wall. It formed part of a vast triangular entrenched camp at whose summit rose the fortress of the Janiculum, and reached out on one side to the Porta Flumentana and on the other to the Porta Trigemina. It is conjectured that the viaduct was not only protected below, but on top by a second series of internal arcades forming a covered passage.

The part discovered, at a depth of six metres, consists of two massive arcades of square tufa, measuring 2.85 met., resting on a pier or base measuring 2.35 by 6 met. The arcades are 50 cent. wide, and are formed of eleven wedges of volcanic tufa. Over the arcades ran a row of blocks which supported the parapet.—*Bull. Comm. arch.*, 1890, pp. 6, sqq., 57–65; *Not. d. Scavi*, 1889, pp. 362–3.

A piece of the Servian Wall.—On the crest of the Capitoline rock, over the Via di Marforio, at a height of 26.50 met. above the level of the Piazza di Venezia, has been found a sufficiently important fragment of the Servian wall which protected the hill on the west. Four courses are left. In arrangement, quality of stone, and, finally, in the quarry-marks, it is identical with other well-known pieces of the wall of Servius Tullius. It had been somewhat injured by the work for the foundations of the Convent of Ara-Coeli.—*Not. di Scavi*, 1889, p. 361.

Discovery of the Porticus Maximæ.—On the northern side of the Piazza del Pianto, have come to light some ruins of an ancient colonnade running parallel to the porticos of Octavia. Five travertine, peperino, or marble blocks were found in place: they served to support the bases of as many columns, one of which, of granite, was found, together with its marble Corinthian base. The distance between each block was 3.40 met. This colonnade cannot have belonged to the porticos of Octavia, whose intercolumniation is only 3 met.; but might it not be a remnant of the portico of Philip, which was joined to them on the west? The marble plan of the Capitol and the base of a statue found in 1868 near S. Ambrogio show that the portico of Philip did not extend nearly as far. The columns therefore belong to another portico, on the same line as and joined to those just mentioned. This must be one of the transverse arms of the *porticus maximæ*, with which in the fourth century the various porticos of the Campus Martius were united, forming a continuous series of colonnades from the Aelian bridge to the Ostian gate. The section discovered was a part of that joining the porticos of Pompey to those of Philip and Octavia. The *porticus maximæ* are mentioned in the inscription of the triumphal arch erected in front of the Aelian bridge by the Emperors Gratian, Valentinian, and Theodosius.—*Bull. Comm. arch.*, 1890, pp. 66–8; *Not. d. Scavi*, 1890, pp. 31–2.

SCULPTURE.—Sarcophagi.—Outside the Porta San Lorenzo, in digging the foundations of a new house, were uncovered, two interesting marble sarcophagi, which are illustrated from photographs in the *Builder* of April 12. The relief on the first represents the story of Medea dramatically told: the figures are broad but graceful in the style of the second century. The second sarcophagus is more scantily carved with figures. The front is strigillated: the centre is occupied by a bust of the deceased in a medallion supported by a group of the three graces. Heads of lions devouring figures occupied the angles, but only one remains. The head-dress indicates the time of Alexander Severus (222–35 A. D.).

Lately discovered sculptures.—The April number of the *Bullettino* mentions some sculptures found in the Vigna Torlonia, near the Campo Verano. A headless marble statue, without legs or fore-arms. It represents an old

countryman robed in the *exomis*, across which is a goat-skin. The treatment is extremely realistic, and the work is good. Many fragments of terracotta friezes of fine style, on which are figures in relief, such as sea-tigers mounted by genii, winged children carrying festoons, bust of Ariadne or a bacchante giving drink to two panthers, bust rising from a spray of acanthus leaves.

INSCRIPTIONS.—*Archaic inscriptions.*—On the banks of the Tiber was found a small circular base with an inscription in archaic letters, perhaps of the beginning of the sixth century: . . . *onius* · *q* · *f* | *Numisio* · *Martio* | *donom* · *dedit* | *meretod*. Two other later archaic inscriptions came to light on bases intended for votive gifts. The first reads: *M* · *C* · *Γ* · *ΟΜΓΥΙΟ* · *ΝΟ* | *ΔΕΔΡΟΝ* · *F* | *ΗΕΡCΟΥΕ*: *M(arcus)* (*et*) *C(aius)* *Pomp(i)lius No(vi)* *f(ilius)* *dederunt Herculi*. It is on a travertine base. The grammatical and epigraphic forms indicate the fifth century: the form *dedron* is new and to be added to *dedrot* and *dedro*.

Not so ancient is the other inscription, on calcareous stone, which is read: *AISCOΛΑΠΙΟ* · *DONO* // | *V* · *ΑΥΒΑΝΙΥC* · *K* · *F* · *ΔΕΔΙΤ*: *Aiscolapio dono[m]* *L(ucius)* *Albanius K(aesonis)* *f(ilius)* *dedit*. The form *Aiscolapio* occurs here for the first time.—*Not. d. Scavi*, 1890, pp. 10, 33.

Votive inscription to Septimius Severus, Caracalla, etc.—On the Via Appia was found a fragment of a votive inscription which is another example of the erasure of Geta's name from all public monuments after his death. It is dedicated by *M. Sapius Primus* to *Septimius Severus, Caracalla, Geta, and Julia Domna*.—*Bull. Comm. arch.*, 1890, pp. 15-17.

Inscription of L. Plotius Sabinus.—At the eleventh kilom. on the Via Tiburtina, Professor Tomassetti found an inscription recording the *cursus honorum* of a consulate personage, *L. Plotius Sabinus*, which is sufficiently interesting to reproduce: *Diis* · *Genitoribus* · | *L* · *Plotio* · *C* · *F* · *Pol* · *Sabino* · | *praetori* · *sodali* · *titiali* · | *aedili* · *cur* · *seviro* · *eq* · *r* · | *quaestori* · *urb* · *trib* · *latiel* · | *leg* · *i* · *miner* · *p* · *f* · *x* · *vir* · | *stl* · *indie* · *habenti* · *quoq* · | *salutation* · *secundam* · | *imp* · | *Antonini* · *Aug* · *Pii* · | *Sabinus* · *praetor* · *magna* · *res* · *Formis* · *perit*. This inscription was adossed to an inscriptionless sarcophagus still containing the body of the deceased. Among the novelties contained in the inscription are the following: the term *diis genitoribus*, which appears only on a coin of Pertinax, and seems related to the rare *diis parentibus*; the title *Sodalis Titialis*, which is almost unique. It is said that *habuit salutationem secundam imp. Antonini Aug. Pii*, and had it while simple praetor, a fact so unusual as to lead some to believe it to be not a personal *salutatio* but one to be transmitted to the Emperor. The place of his death, *Formis*, may be *Formiae* on the Volseo-Latin coast or a *Formae* in Africa.—*Bull. Comm. arch.*, April, 1890; *Not. d. Scavi*, 1890, pp. 35-6.

SAN DAMIANO D'ASTI.—A ROMAN MILITARY PAY-CHEST.—Don Vitaliano Soesi publishes in the *Riv. Ital. di Numismatica* (1890, No. 1) a communication describing the coins contained in an amphora found in the territory of Asti. The find consisted entirely of small copper coins: many were lost or dispersed. The writer examined over three hundred which belonged to the close of the third and beginning of the fourth century A. D., the earliest being of Gallienus and the latest of Maximianus Hercules. Those of Aurelian, Probus and Diocletian are especially numerous. The greater part are in good preservation. Among them are two new types and many variants. The collection appears to be not a hidden treasure but part of a military chest for the payment of some legion or cohort, perhaps hidden by the *quaestor militaris* in a time of danger.

SARDINIA.—On the promontory of Monte Alvo, in Sardinia, Signor Tamponi has discovered a number of human skeletons in one of the so-called tombs of the giants, thus confirming a tradition to that effect preserved by Lamarmora, which had hitherto been deemed improbable.—*Athenæum*, March 29.

A natural cavern, formed of three great granite rocks, was first found, containing two skeletons and some fragments of very early black ware. The tomb of the giants, found afterwards, was in remarkably good preservation.—*Not. d. Scavi*, 1889, pp. 413-14.

TOIRANO.—PREHISTORIC CAVES.—Sig. Morelli makes a report in the *Bullettino di Paletnologia Italiana* (Jan.-Feb. 1890) on his exploration of two caverns at the foot of Monte Calvo, province of Genova, near the village of Toirano. The territory is abundant in such caves, as it is formed of a cavernous dolomitic calcareous rock. The caves explored were those called *Tana del Colombo* and *Tana della Basua*. The former yielded some fossil bones of mammals and birds, and paleolithic implements of stone and bone. It evidently served as a dwelling to the primitive Ligurians, at a time when a great bear still roamed the hills and before the knowledge of pottery. In the second cave were found parts of nine skeletons and two kinds of terracotta vases, showing it to have been used not as a habitation but as a tomb.

VITERBO (near).—In the district of Colleno, has been discovered a chambered tomb with a vestibule adorned by two columns. The cell contained two sarcophagi of travertine, in which were found a golden ring and some gold thread, remnants of the rich clothing of the deceased.—*Athenæum*, March 22.

CHRISTIAN ANTIQUITIES OF ITALY.

DATE OF THE DEATH OF GENTILE DA FABRIANO AND OF GAUDENZIO FERRARI.—Professor Melani calls attention, in the *Courrier de l'Art* (1890, No. 16), to the manner in which the dates of the death of two famous Italian

painters have recently been discovered. Signor Zonghi has found that Gentile da Fabriano did not die in about 1450, as had been supposed, but much earlier, as is shown by a notary's deed relating that the painter died in Rome in 1428 or at the end of 1427. It is therefore clear that he could not have been a pupil of Fra Angelico, and that, when Roger van der Weyden expressed in 1450 his famous praise of Gentile (that he was the greatest Italian painter), he was speaking from tradition.

A document published in the *Archivio Storico Lombardo* (xv, p. 198) shows that Gaudenzio Ferrari, who was known to have been born in 1481, died, in Milan, Jan. 31, 1546.

FIRENZE.—SANTA TRINITÀ.—*Discovery of the ancient Mosaic-pavement, Crypt, and Façade.*—During certain repairs made at this church by order of the Government, the twelfth-century crypt has been discovered. While digging in the central nave to relay the pavement (which was greatly out of repair), down at the level of the thirteenth-century church, the crypt was discovered. It is built of *pietra forte*, and has three semicircular apses: it was found to have suffered considerable damage when the church was rebuilt in the XVI cent., and when graves were dug in it at a later period. The pavement of the crypt has been partially uncovered: it is composed of a reddish cement, and before the altar of the chapel is a portion of a mosaic-pavement formed of cubes of white and black marble: in the centre, on a background of white, are two figures of dragons (in black) facing each other; around this central portion is a border consisting of white foliage on a black ground. These fragments, as well as the remains of very ancient construction in *pietra forte*, must have belonged to the church of 801 A.D. The continuation of excavations led to the discovery of the ancient doorway and of four steps of the stairway leading to the crypt. Between the modern and ancient pavement was found a large marble sepulchral slab on which was sculptured a recumbent figure (much worn) representing (as we learn from the inscription) *Roggero Buondelmonti, General of the Order of Vallambrosa*, who died in 1319. Further researches led to the discovery of some remains of the original fresco-decoration on the wall of the nave, covered with a thick layer of modern plaster. The beautiful marble door belonging to the chapel of *B. Bernardo degli Uberti* has likewise been found; and, behind the modern façade, was discovered the ancient Gothic façade of Nicola Pisano: it has alternate stripes of white and *verde di Prato* marble, in the same manner as in many churches of Pisa, Pistoia, etc.—*Builder*, Jan. 11.

LODI.—RESTORATION OF SAN LORENZO.—When new Lodi was founded during the early Lombard wars, after the destruction of the old city, the basilica of San Lorenzo was founded by bishop Lanfranco between 1154 (when the foundation-stone of the new city was laid by Emperor Frederick)

and 1158 (the date of the bishop's death). It had been so barbarously disfigured as to leave hardly any traces of the primitive building. A restoration of the interior has been carried out. The material was brick, very carefully laid; the capitals of the columns are of terracotta and of varied decoration. A fine Roman column was found within a pier in the presbytery.—*Archivio storico dell' Arte*, Nov-Dec., 1889.

MODENA.—A NEW PAINTER: PAULUS SERAPHINI.—In the Cathedral of Barletta is a painting of the Virgin and Child on a gold ground, which is held in great veneration. It was carried in procession to meet the famous thirteen Italian champions in the *Sfida di Barletta* of 1503. The inscription on the picture contains the following: *Paulus filius magistri Seraphini de Serafini pictoris de Mutina pinxit*. A Paolo da Modena of the XIV cent. was already known, but it is uncertain whether he is identical with the painter of the Barletta painting whose father Seraphino Serafini has left works in the cathedrals of Modena and Ferrara.—*Arch. stor. d. Arte*, 1889, Nov.-Dec.

ORVIETO.—A MOSAIC FROM THE CATHEDRAL.—We read in the *Mittheil. d. k. k. oest. Museums* (1890, No. 3) the following account of an interesting mosaic: "One of the most famous of the monuments of Italian art of the XIV century has lately come into the possession of a Roman antiquarian: it is the great mosaic by the famous Florentine Andrea Orcagna representing the birth of the Virgin, which once adorned the central gable of the front of the cathedral of Orvieto. It had been entirely lost sight of and only a copy made at the beginning of this century remained. The original was in many pieces which have been put together at the Vatican workshop, and it is now in the hands of the dealer Pio Marinangeli. It is in the strong, simple and broad Giottesque style, of monumental value; but its tones are unfortunately damaged by the new coat of varnish."

ROMA.—FRESCO OF THE WISE VIRGINS.—It was customary, in the early Christian period, to pronounce over the bodies of deceased women, the parable of the virgins. A similar idea is expressed in a catacomb fresco recently examined by Mgr. Wilpert. In the centre is an *orante* above whom is her epitaph; at her right are the five wise virgins with lighted torches; on her left, four of these are represented seated at the celestial banquet, the fifth place being reserved for the defunct. This is a novelty, and an artistic representation of the prayer of St. Gelasius: *transeat in numerum sapientium puellarum*.—*Revue Critique*, 1890, No. 9.

MINO DA FIESOLE IN ROME.—The multitude of works of sculpture, belonging to the early Renaissance, that still exist in Rome have never been studied. Even Vasari ignored them. The names of their artists, their dates and the circumstances of their execution, are generally entirely wanting. Only lately have a few critics undertaken to bring a little order out of chaos. Such are Schmarsow and Von Tschudi who have made

known respectively the artists Andrea da Milano and Giovanni Dalmata. But most of the sculptors that worked in Rome in the quattrocento and early cinquecento were Tuscan. In a paper in the *Archivio* the well-known critic Domenicò Gnoli shows that Rome was the principal field for the activity of the famous sculptor Mino da Fiesole. He describes the bust of Nicola Strozzi (1454), the pulpit of Pius II, the ciborium of Sixtus IV and other works, and at the same time brings in his contemporaries and rivals Paolo Romano and Isaia da Pisa.—*Archivio storico dell'Arte*, 1889, Nov.-Dec.

ART IN ROME UNDER INNOCENT VIII.—M. Eugène Müntz contributes to the *Archivio storico dell'Arte* (Nov.-Dec., 1889) a number of documents relating to the condition and history of the Fine-arts in Rome under the pontificate of Innocent VIII (1484-92). Although these years are not looked upon as artistically brilliant, they are interesting as sealing the triumph of the Renaissance. Perugino and Antonazzo Aquilio worked in 1484 and 1485, and the latter continued his labors up to 1494. Pier Matteo d'Amelia is shown to be a more important artist than was supposed; documents of 1485, 1486, 1488, and 1492 are given, recording orders and payments. He worked with Antonazzo. Mantegna executed, between 1488 and 1490, the frescos of a chapel in the Vatican, which was destroyed by Pius VI; the hitherto unnoticed but detailed descriptions of them given by Tuja and Chattard are reprinted. Filippino Lippi, Nardo, Gian Giacomo di Andrea are also mentioned. Among painters on glass are Filippo da Pesaro and Giuliano Romano; among miniaturists, Giocchino, Gregorio and Antonio.

SARTIRANA.—A DISCOVERY OF COINS.—In November, a workman found, in the bottom of a pot buried in the earth, a mass of silver coins wrapped in cloth and badly oxidized by the water in which they were standing. About a half were melted down. Of these that were saved the greater part were coins of Gian Galeazzo Visconti and Gio. Maria Visconti; and, from the few remaining of Filippo Maria Visconti, it may be argued that the treasure was hidden under his dukedom. The cities represented are Avignon, Bologna, Casale, Genova, Milano, Pavia, Piacenza, Savoia, Verona. A number of the Milanese coins are new varieties.—*Riv. Ital. Num.*, 1890, 1.

VERONA.—EARLY FRESCOS OF S. NAZARO, AND AN INSCRIPTION OF 998.—An important place is held in the history of Veronese painting, and, in fact, in that of Italian painting in general, by the ancient frescos of the chapel or grotto of San Nazaro in Verona, which help to span the gulf between the frescos of the catacombs and of the Giottesque revival. Maffei had justly noted two layers of frescoed plaster, the older of which was seen where the later one had fallen. Dionisi had eight plates executed of the frescos then existing, which remained unpublished; Orti illustrated them inae-

curately in 1841. The dates attributed to them were the VI, VII and VIII centuries. In 1881, Signor Cipolla proposed that the frescos of the upper coating (which he attributed to the X or the XI century) should be removed to save them from ruin. This has since been done, leading to the uncovering of the earlier frescos beneath. The latter were in a very bad condition, made worse by the removal of the upper layer, which led to the fall of a large part of the plaster and laid the rock bare.

The church consisted of three chambers excavated in the rock. The outer one has lost the few frescos it had. The second has a series of angels within intersecting circles arranged all over the walls; they belong to the earlier work and were never covered by a second plastering. A great arch leads thence into the third hall which constitutes the church proper, whence the frescos of the XI cent. have been removed. It is curious that these were in general mere repetitions of the early ones. The older frescos, now uncovered, are as follows. On the ceiling is a large figure of Christ, seated and amply draped, his head encircled by a cruciform nimbus. His right arm is raised, apparently in blessing; in his left he holds an open book on which was an inscription, now effaced. The head of Christ is of a severe type, with long beard and hair. The entire figure is imposing; it is enclosed in an oval aureole upheld by two figures on rt. and lt., while the four angles of the vault were occupied by the symbols of the four evangelists, of which only the lion and angel remain with their appropriate inscriptions. The frescos on the end wall are interesting. In the central niche there probably stood a figure of S. Michael, as in the later series. Above, within a circle, is the Virgin nimbcd, on either side of whom is an angel with great wings folded in front. On either side of the central niche were two circles that originally contained busts. Two of these, still remaining, are shown by inscriptions to be SS. Nazarius and Celsus. In the left wall was cut an *arcosolium* with decorative paintings. On the right is a bust of Sta. Juliana with its inscription. The church, as is known, was dedicated to the three saints just mentioned.

On the left side of the vault, next to the entrance and outside of the aureole surrounding the figure of Christ, we read the following inscription painted in white letters on a green ground: \dagger ANN·AB INCARNC
dNI NRİ | IV XPI | DCCCCXCVI·INDIC X. Under them, in white letters on a yellow ground, was an inscription of at least three lines, of which it was possible to read only: PHILIPPI ET IACOBI |
SCİSMI | C S. The importance of the first inscription is evident, because, as its letters are identical in form with those used in the paintings, it gives their date as 996; or, more exactly, it shows that they were finished between September and December 996, as this is indicated by the X indiction which then began.—CIPOLLA, in *Archivio Veneto*, fasc. 76, 1889.

VOLTERRA.—ZACCARIA AND GIOVANNI ZACCHI, SOULPTORS OF VOLTERRA.—Umberto Rossi publishes in the *Archivio storico dell'Arte* (1890, Genn.-Febb.) some documents relating to the lives and works of Zaccaria and Giovanni Zacchi. Zaccaria was born at Arezzo in 1473, his father being from Volterra. He studied in Florence and in Rome, worked in Bologna at San Petronio as early as 1516, and established himself in that city. Giovanni was the son of Zaccaria, and it is to him that most of the documents relate. He not only executed statues in bronze, like that of Paul III at Bologna, but also a number of bronze medals. He was in the service of the Farnese family for some time.

SICILY.

THE PREHISTORIC ARCHÆOLOGY OF SICILY.—Signor Orsi contributes to the *Bullettino di Palehnologia Italiana* (1889, Nos. 9-12) two papers of great interest on the early archaeology of Sicily. He prefixes them with the true words: "The monuments, archaeological remains, and the forms of the pre-Hellenic culture of Sicily may be said to be almost completely unexplored." He aims at opening up this new field. A fitting summary of his conclusions and of the material on which they are based will be given in the next number of the JOURNAL. It may here be said that he believes this early culture of the Siculi and Sicani to have come from the East, and finds a series of vases and other objects of a decided Mykenesian character.

AKRAI = PALAZZOLO.—In past years, the ancient necropolis of Akrai has yielded from its rectangular sarcophagi, opened in the rock, many Corinthian vases. Of late, Sig. Orsi was so fortunate as to find in one of them a part of the cover on which were inscribed two lines of a *boustrophedon* inscription reading: Βραχίδα σιπύ. The angular ζ is new in Syracuse, and apparently in Sicily. The χ is characteristic of Eubœia and the Chalkidian colonies. Akrai was founded in 664 by the Corinthian Syracuse, and yet this seems to be the tomb of a Chalkidian. The inscription is laconic and of rare form: "I am Brachidas." It belongs to the first century of the city; it also demonstrates the Greek as opposed to the Phœnician character of the necropolis.—*Not. d. Scavi*, 1889, pp. 387-9.

SYRACUSE.—WELLS OF THE ANCIENT CITY.—Signor Orsi has been conducting a very active exploration of various parts of the ancient city. In the Cathedral on Ortygia, the site of the temple of Athena, was found an archaic dedication to Apollon by Alkiades.

The most extensive work consisted in clearing out a large number of ancient circular wells dug in the rock at many points, which had never been scientifically investigated. Beside leading to some interesting historical deductions, they were found to contain numerous objects belonging to the fourth and third centuries B. C., including vases of many varieties

of shape and manufacture, coins, lamps, terracotta figurines, etc. Their latest date coincides with the period of the fall of the city before the Romans in 212.—*Not. d. Scavi*, 1889, pp. 369-87.

SPAIN.

HISTORICAL MONUMENTS.—The *Boletín de la R. Acad. de la Historia* (Jan.-Feb., 1890) has published a complete list of the monuments of Spain declared to be of national importance, *monumentos declarados nacionales*. The first is the monastery of *la Rábida* (Huelva), declared so by a royal decree of February 23, 1856; the last is the ex-monastery of Santa Maria La Real de Nájera (Rioja) Logrono, of the date of Oct. 17, 1889. They number in all fifty-five, a very small number if compared to this class of monuments in Italy and France. Of these, one is prehistoric, in the Balearic Isles, two are Moorish, one is a Jewish synagogue, and the rest are Christian, ten being civil monuments, about fourteen monasteries, and twenty-eight churches.

ALMERIA (province of).—**ARABIC SEPULCHRAL INSCRIPTIONS.**—At Jarea, was found an Arabic tombstone with an inscription in seven lines, saying: *This is the grave of Motarrif ben Mohadjir, who died in the year 329.* The date corresponds to June 28, 941 A. D. A second inscription, found near Peehina reads: *This is the tomb of Abu Hamema, ben Ashats, el Omawi, who died in the year 239.* The date corresponds to April 16, 854 A. D.—*Bol. R. Acad. de la Historia*, Jan.-Feb., 1890.

OVIEDO.—**EARLY BASILICA OF SANTA MARIA.**—D. Fortunato de Selgas has published in the *Boletín R. Acad. de la Historia* (March, 1890) a paper on *La primitiva basilica de Santa Maria del rey Casto de Oviedo y su real panteón*. This was an early church in the basilical style built under the early Goths, in contrast to the Byzantine style used in San Miguel de Limio, and to the Oriental style of some other Visigothic constructions. The author takes occasion to study the intricate and little-known subject of early-Christian Spanish art, and also to give interesting information regarding the royal tombs in the basilica of Oviedo.

TOLEDO.—**CISTERCIAN MONASTERY OF SANTA FE.**—A correspondent of the *Boletín de la Historia* (Jan.-Feb., 1890) communicates to it two important documents of the year 1266, the originals of which are in the Cathedral of Santiago. They relate to the construction of the beautiful church of the monastery of Santa Fe of Toledo. One is an inedited bull of Clement IV (Jan. 3, 1266), the other is a letter of Fray Lorenzo, bishop of Ceuta, dated June 3, 1266, which makes known for the first time a bishop of Ceuta in 1266. A passage in the papal bull says: *Cum itaque dilecti filii Prior et Conventus monasterii Sancte Fidis Culatravensis*

Toletani, Cisterciensis ordinis, sicut iidem nobis significare curarunt, ecclesiam ipsius monasterii de novo edificare ceperint opere sumptuoso, et ad consummationem ejusdem operis proprie sibi non suppetant facultates, Universitatem vestram rogamus, etc. This appeal of Pope Clement is addressed to the dioceses of Toledo, Sigüenza, and Cuenca, and accords them indulgences for their gifts toward the building of the church. On the other hand, the similar appeal of the bishop of Ceuta speaks not of the construction but of the repairing of the church: *Cum igitur ecclesia sancte fidei apud Toletum, ordinis Calatravensis, reparatione indigeat, et non possit sine fidelium elemosinis consumari, etc.*

This monastery of Santa Fe occupies the site of the Alcazar of King Wamba and the palaces of Galiana. In 1202, King Alfonso VIII gave the chapel of Santa Fe, founded by Alfonso VI, together with a part of the adjoining palaces, to the military order of Calatrava for the foundation of a priory. It was later given to the community of the Comendadoras of Santiago, who occupied it in 1502.

The exterior chapel, or *Capilla vieja*, is remarkable for the beauty of the exterior of its apse. The interior chapel of *Belen* contains an epitaph of 1252 (or 1280). Recent reparations have uncovered the beautiful roof of the XVI century.

VISIGOTHIC INSCRIPTION.—Sr. Fita communicates to the *Acad. de la Historia* (*Boletín*, March 1890) a photograph and reading of a much-damaged but inedited and interesting Visigothic inscription of the year 579, in the provincial museum of Toledo. It is an epitaph. He reads it: + *Imma Frita* ✠ *Inafrita* *vi* *et* *annos* *plus* *minus* *XXXV*, *requievit in pace* | *sub die sexto id(u)s novembri in era DCCVII* | *Datum est pro locello ipso in auro solidos III*. The name is purely Visigothic.

FRANCE.

FRENCH PAINTERS OF THE XIV CENTURY.—The *Archives historiques* publish some documents interesting for the history of French painting during the XIV century: the painters mentioned are Guiot of Meaux (1331–32); Othinel of Meaux (1331–32); and Jean Petitclerc of Rebaix (1336–64). The latter two are glass-painters. We take from the accounts of the dowry of Queen Jeanne d'Evreux, preserved in the *Archives nationales*, interesting information concerning the works executed by various artists at the châteaux of Crécy-en-Brie and Château-Thierry. The first extract is taken from the account of 1331–32 and relates to Crécy-en-Brie: *Pour salaire de GUIOT LE POINTRE, de Miaux, et de JEHANNOT, son compaignon, à faire certain ouvrage de peinture en ladite garde robe et en la chapelle, et y furent pour XV jours amdeux ensemble Item, pour faire tant en*

ladite garde robe comme en la chambre de mes jeunes dames & piez de VERRIERES par OTHINEL LE VERRIER, DE MIAUX, etc.

According to the account of 1336-37, JEHAN LE VERRIER, DE RESBEY made *certain ouvrages de verrerie* in the same château of Crécy, placing LXXVII feet of glass at XXXII deniers per foot. Doubtless he is the same as JEHAN PETITCLERC, DE RESBÈS, VOIRIER, who struck a bargain with the dowager queen in 1362 to place in good condition all the glass of her châteaux: *mettre en bon estat tous les voirres et verrières des chastiaux et maisons de Chastiau-Thierry, Jaugonne, Nully-St-Front, Ygny le Jard, Coulommiers, Crécy et Crevecœur . . . et de les soutenir et retenir . . . d'ores en avant . . . à la volenté et vie de mad. dame et vie dud. Jehan.*

The accounts of 1363-64 show how he placed new painted-glass windows in the chapel and apartments of the château of Château-Thierry, representing the crucifixion, annunciation, and coronation; and an image of Ste. Thecla.—*Chron. des Arts.*, 1890, No. 11.

A GLASS PAINTER OF 1100.—Only a few glass-painters anterior to the XIII century are known by name. The cartulary of the Burgundian Abbey of Molême, preserved in the departmental archives of the Côte-d'Or, gives the name of one of these artists, who lived in about 1100: *Walterius vitri artifex*. He figures, by the side of Rainbaldus, mayor of Molême, as witness of a donation made to the monks by a neighboring lord at the end of the XI or beginning of the XII cent. It is probable that, as the monastery was being built at this time, this artist was at work on some windows for the abbey-churches. No trace of or document concerning any such ancient windows remain.—*Archives historiques*, vol. 1, No. 1.

CASTELNAU-LE-LEZ.—At this small village near Montpellier, situated on the site of the Roman city of Substantion near the Domitian road from the Rhone to Spain, a prehistoric necropolis has been found, belonging apparently to the neolithic age. The anthropologist Delapouze has examined the cranium of a man killed by a stone arrow, the head of which still remained in his fractured jaw. Most curious is a *humerus* with broken bones, which, if human, belongs to a body at least 3.50 met. high. Together with the skeletons were found knives, arrow-heads, and a small slab of undetermined use, all of flint.—*Nuova Antologia*, March 16, 1890.

HAUTE-BORNE.—In the excavations for uncovering the Roman aqueduct of the Haute-Borne and on the site of the ancient Gallic citadel, vestiges of which still exist in the vicinity, among other curious objects were found a Roman lamp, an iron axe, five bronze fibulae, jewels and toilette articles, a stiletto, an iron knife for sacrifice, and numerous medals and coins.—*Cour. de l'Art*, 1890, No. 2.

JARNAC (near).—**MEROVINGIAN CEMETERY.**—An archaeological discovery of the greatest interest has just been made by M. Philippe Delamain,

of Jarnac, in the excavation of a Merovingian cemetery discovered by him in 1887 and excavated since that time. About three hundred tombs have been thus far opened, all of them situated on two sides of an ancient Roman road, paved and concreted, leading, apparently, from Jarnac to Beauvais-sous-Matha, and crossing at right angles the broad Roman road from Saintes to Limoges. These tombs contained many objects: jewels, arms, vases and glasses, of which the most curious specimens have been sent to the archaeological society of the department. Many among them, notably two gold rings, have a real artistic interest, and show how the Franks of this time possessed the art of working in metal and of making use of garnets and enamel as means of ornamentation. The earthen vases and the glasses of various forms are equally curious; the arms consist of battle-axes (*francisques*), axes and pikes; there are also clasps, metal buckles and glass beads. These articles are attributed to the VI cent., and greatly resemble objects of the same kind previously found in the departments of the Aisne and the Somme. It is judged to be the most important discovery ever made in the department.—*Cour. de l'Art*, 1890, No. 15.

PARIS.—A PARISIAN SCULPTOR AND A COLLECTOR OF ABOUT 1380.—In the first number of the *Archives historiques* is published a notice which discloses the name of a new sculptor of the Gothic period, Regnaud de Cambrai. We read: *Regnaud de Cambrai, tambier*, living in Paris, gives a receipt on April 28, 1380, for the sum of seven livres (112 sols) due him for the tomb (*pour la tombe*) of Jean de Neuchâtel, canon of St. Merry, made by him, delivered and placed at his place of burial (*par lui faite, livrée et assise sur le lieu de sa sépulture*). Jean de Neuchâtel died March 30, 1380: he was a counsellor of the Duc de Bourbon and an ecclesiastic beneficiary of several churches: he owned a remarkable collection of about a hundred manuscripts, the best of which were, at his death, appropriated by Charles V for the royal library.

M. PIOT'S GIFTS.—One of the greatest of French amateurs and collectors of works of art, M. Eugène Piot, has recently died, leaving to the Institute his personal property and the product of the sale of his collections: giving to the Louvre and the Cabinet des Estampes some pieces that are regarded as among the finest he possessed. He leaves to the Academy of Inscriptions, his universal legatee, the free disposal of the income of his fortune, which is valued, including works of art and books, at about a million francs. He was a precursor in the love for collecting works of the Italian Renaissance as well as the Tanagra figurines, and brought to France the first Kypriot vases and statuettes seen. He was ever in the van, and a most omnivorous collector, and yet not a single false or even suspected piece is said to have been purchased by him.

Among the pieces given to the Louvre the following are famous: (1)

bronze bust of Michelangelo; (2) head of St. Elizabeth, by Raphael; (3) large terracotta medallion, by Donatello. He thus expresses his legacy to the Academy of Inscriptions: "The legacy is made with the object of adding to the independence and liberty of action of the illustrious society, to be employed in any expeditions, missions, travels, excavations or publications that it may wish to make in the interest of historical or archaeological science," etc.—*Chron. des Arts*, 1890, No. 5.

LOUVRE.—Réarrangement of Antiquities.—The halls including the antiquities of the Middle Ages, Renaissance, and Modern period are being remodelled. The first one is on the 2nd floor, after passing the gallery of drawings and the hall of pastels. It once contained part of the ivories; now it is reserved for the glass-ware, which is thus well exhibited. The next room formerly contained objects of all kinds in terracotta, carved wood, wax, coffers, stone vases, etc.: it is now filled with the ivories, which thus form a magnificent collection. The statuettes, boxes, coffers, powder-horns, oliphants, carved handles, etc., are placed in two large upright cases, while the flat objects, such as diptychs, book-covers, etc., are enclosed in low cases. The stone vases occupy the next small room that serves as a passageway to the Thiers collection and to the halls of sciences.

All the halls, which have hitherto borne no names, or names but little known, have been numbered according to the sections. Other changes will be noticed when they are completed.—*Chron. des Arts*, 1890, Nos. 4, 9.

APPOINTMENT OF M. CLERMONT-GANNEAU.—On the proposition of the Ministry of Instruction and Fine Arts, M. Clermont-Ganneau, associate-director of studies at the *École pratique des Hautes Études*, for Oriental archaeology, has been appointed professor of Shemitic epigraphy and antiquities at the Collège de France.—*Chronique des Arts*, 1890, No. 13.

PERIGUEUX.—A Roman Mosaic has just been discovered in the house of M. Brouilland, rue Condillac: it is decorated with arabesques, flowers, and geometric designs in black, white, yellow and red. Its condition is quite dilapidated.—*Couv. de l'Art*, 1889, No. 50.

PLANCHE (depart. of Ain).—DISCOVERY OF COINS AND JEWELRY.—In March 1889, a peasant, while digging under a rock, came upon a broken vase, around which were lying coins and jewelry. These pieces are few in number but of remarkable interest. The coins are Roman, and belong to the second half of the third century A. D., and this also gives the date of the jewelry—a rare advantage. The find is one of the most remarkable of its kind ever made. There are nine coins, belonging to the period when a real Gallic empire flourished, to end only through the submission of Tetricus to Aurelian. (1) Ulpus Cornelius Laelianus (267) with the inscription IMP C LAELIANVS P F AVG. (2) Pius Avonius Victorinus (265-67) with the inscription IMP VICTORINVS P F AVG, with the

unique reverse GAVDIA PVBLICA: this coin is inedited and is interesting for the four female figures (of Fortunes?) on the reverse. (3) Also of Victorinus with the reverse LEG III GALLICA P F. This coin is not only new but is the only numismatic piece commemorating the III Gallic Legion. This legion was famous and the list of its glorious victories is long: they are succinctly referred to in the article in the *Revue Numismatique*. It is the only fact that comes to suggest that a part of this legion was detached from the main body for the defence of Gaul, while the rest remained in the East. (4) Tetricus the Elder (267-74) with the inscription IMP TETRICVS PIVS AVG. This is apparently the only existing example of this coin, struck in 270. (5) Tetricus father and son; with inscription IMPP TETRICI PII AVGG. This also is inedited. (6,7) Aurelian (270-75). The inscription reads IMP C L DOM AVRELIANVS P F AVG. (8) Diocletian, and (9) Maximianus—both quite rare.

The jewelry is composed of three gold rings, two of which have intaglios; two symmetrical bracelets, also of gold; a long gold chain; fragment of a necklace of sapphires mounted in gold; an amulet composed of a small animal resembling a bear or an elephant; a medallion enclosing the coin of the Emperor Victorinus; two finely worked oblong objects of unknown purport, both of them gold prisms with rich decoration.—*Revue Numismatique*, 1889, No. 4, pp. 514-38.

RENNES.—**GALLO-ROMAN MILESTONES.**—There has been discovered, in the foundations of a house situated at Porte-Saint-Michel, a series of milestones of the Gallo-Roman period. The inscriptions are, for the most part, very well preserved, and are of interest for the history of Rennes. M. Decombe, the director of the archaeological museum has ordered excavations to be made on the spot.—*Cour. de l'Art*, 1890, No. 15.

ST.-BENOÎT-SUR-LOIRE.—**AN ARCHITECT OF THE CHURCH.**—We take the following from the *Archives historiques* as quoted in the *Chron. des Arts*, 1890, No. 12: "The present church of Saint-Benoît-sur-Loire, begun in about 1075, was finished only toward 1218. The monk Gallebert was probably its first architect; at least he directed the work in about 1080. A document of the cartulary of Saint-Benoît-sur-Loire makes known the name of another *maître de l'œuvre* of this church in the following century: he is a monk of the abbey named Giraud, who figures among the witnesses to a charter of the year 1160: *Ego Macharius abbas adfui et subscripsi, residentibus nobiscum in capitulo nostro Lancelino priore, Dagoberto sub-priore, Berengerio praeposito, Gaufrido thesaurario, GIRAUDO MAGISTRO OPERIS*, etc. This architect is not mentioned in the repertories of A. Lance and Ch. Bauchal."

SAINT-PAHU.—A remarkable find has just taken place at St.-Pahu, Finistère. On removing a granite block to the southwest of the village, a

Roman flanged tile was observed, which had, apparently, served as a cover to a box of wood now fallen into decay. Inside were found over 10,000 small plated Roman coins, the greater part of which had been minted at Augusta Trevirorum (mod. Trèves). The coins were of Valerian, Diocletian, Constantius, Maximus, Lucinius, Constantine the Great, and Constantinus II. They are all well-preserved, and date from 260 to 360. On digging further, there were found two silver cups, and the remains of a patera highly ornamented in *repoussé* work, the rest of it being destroyed by oxidation.—*Athenæum*, Dec. 21, 1889.

SAINT-VAAST.—Near Saint-Vaast is the site of an ancient fortress which long resisted the English invasion of the XIV cent. Taken and burnt after a bloody resistance, its ruins were for a long time used in repairing or building houses in the neighborhood. Excavations made during the last four years have given an unexpected result. Little by little, passing from one foundation to another, the plan of the fortress has been entirely reconstructed, and the double wall, the postern, the dungeon, its two wells, the annexes, etc., all can be recognized. All the objects antedate 1356, the date of the siege: they comprise remains of armor, harness, bits, spurs, partisans, arrow-heads, lances, axes, numerous bronze and silver coins, as well as paving-slabs of terracotta, and some curious sculptures.

But the main interest lies in a most unexpected discovery through which the entire heroic tragedy is made clear. Reduced to the last extremity the garrison attempted a sortie. Before carrying it out, everything was prepared to blow up the castle in case of failure. There have been found *in situ* the copper tubes containing a part of the semi-carbonized slow-matches. The sortie failed and the besieged blew themselves up in the inner *enceinte*, and their bodies, crowded within a narrow space, were covered by the falling walls of the ramparts and dungeon. There were found their bones mingled with arms and armor and horses' equipments.—*Chron. des Arts*, 1890, No. 5.

BELGIUM.

BRUXELLES.—THE BLACK TOWER AND THE ANCIENT FORTIFICATIONS.—General Wauwermans communicates to the *Académie d'Archéologie de Belgique* (*Bulletin*, XVIII, 1889) a memoir on *La Tour noire, des anciennes fortifications de Bruxelles*. It shows the following facts. The demolition of the houses expropriated by the city for the transformation of the quarter of the *Vierge noire* have brought to light the remains of a tower which formed a part of the earliest fortifications of Brussels built, according to Gramaye, in 1040, but more probably in about 1100. It has been dubbed *la tour noire*. It is still possible to trace the level of the *rez-de-chaussée*, the staircase leading to the *chemin de ronde*, the place and form of the loop-holes,

the arcades under the *chemin de ronde*, etc. In a plan of 1748 the entire tower is still given. The fortified *enceinte*, built in 1040 by Lambert II, was formed of crenellated walls strengthened in the interior by arcades (an example of which remains in a court of the new *Athénée*) and divided at intervals by semicircular towers pierced with loop-holes. The aspect of these towers was the same throughout, and is given in numbers of drawings and paintings. This first *enceinte* became too small and was replaced by a wider one in the second half of the XIV century, but it continued to exist down to the time of Philip II.

GERMANY.

GUTENBERG.—PREHISTORIC CAVES.—Some excavations carried on by MM. Heppinger and Gussmann in the cave called Heppenloch, in the neighborhood of Gutenberg, in Württemberg, have led to the discovery of galleries and grottoes that surpass in extent and beauty anything of the kind hitherto known. They appear to belong to the tertiary period and the objects found support this early date.—*Chron. des Arts*, 1890, No. 4.

MAINZ.—A GALLIC ALTAR.—At a meeting of the French *Acad. des Inscriptions*, M. Flouest read a note relating to an altar discovered at Mainz which is very instructive for the study of Gallic mythology. His attention was called to it by Professor Conze. Especially interesting is the representation of the Gallic divinity called the *god with the hammer*, in whom M. Flouest inclined to see the *Deus Pater* of the Druids, the father of the race. The corresponding female divinity placed on one of the other faces of the altar is represented in the guise of *Diana Venatrix*. He connected this myth with the traditions of the primitive religions of Asia, which came directly to Gaul without Græco-Roman intervention.—*Chron. des Arts*, 1890, No. 13. See article in *Revue Arch.*, 1889, March-April.

AUSTRIA-HUNGARY.

BREGENZ=BRIGANTUM.—ROMAN TEMPLE.—There have been found at Bregenz the foundations of a small and simple Roman temple, in which one can identify the circuit of the *cella*, the square niche for the statue of the divinity, and the square platform opposite to it. In front of the steps is the basement for the altar, and beyond are three steps that lead into the temple-court. The mosaic-pavement is of good style, and so is the masonry. A silver *denarius* of Julia, daughter of Titus, is the only other object found. A Roman dwelling-house was discovered in the neighborhood.—*Mitth. d. k. k. oester. Museums*, 1890, No. 3.

GALICIA.—PALETHNOLOGIC RESEARCHES.—At the meeting of the Academy of Sciences of Cracow (*Bulletin*, 1890, pp. 97-100) held March 7/90,

M. G. Ossowski made a report on the palethnologic researches undertaken by him during 1889. The country was found to divide itself into three distinct and well-defined palethnographic territories: (1) the West from Cracow to the San; (2) the Central East or territory of Leopold, including the districts of the Centre and Northeast; (3) the Southeast or territory of Pokucia-Podolia. These divisions are both geographical and monumental. The first region is characterized by crematory cemeteries with isolated urns; the second, by kourhans which begin east of the San and become most numerous towards the east frontier and then pass northward into Volhynia and Ukraine; the third, by tombs composed of stone-slabs and other monuments usually accompanied by painted ceramics. Besides visiting a large part of the grottos in the second division, the explorer undertook excavations in a number of crematory kourhans, each of which contained a number of funerary urns, usually much damaged. The excavations were carried on especially at Tenetniki, Chorostkow, Zablotce (iron age), Uwisla (stone age). The most remarkable of the crematory cemeteries is that of Wasylkowce, where a new form of burial is practised; for, though each tomb contains a number of painted vases, none of these hold any ashes or burned bones. Prehistoric stations were found at Zablotce, Hucisko-Brodzkie, Labince and Wysock.

INCORUSTION OF METALS.—In a report made by M. Lepczy to the Academy of Cracow, he proves that the art of incrusting arms was introduced into Poland long before the date when it passed from India to Western Europe. Benvenuto Cellini claimed, about 1520, to be the first to do this, but such incrustated arms were made in Poland in the xiv century. Four swords of Polish manufacture, now preserved in private collections, are incrustated in the most remarkable manner, and bear the dates of 1342, 1406, 1414, 1415. Great privileges had been accorded, as early as the xiv century, to the armorers of Lemberg and Cracow: the importation of arms from Turkey was strictly forbidden. It is conjectured that the art of incrusting was introduced by Armenians, who sought refuge in Poland in great numbers, fleeing from Mohammedan persecution.—*Chron. des Arts*, 1890, No. 8.

MEDIAEVAL MONUMENTS AT ZAMOW.—M. Lusozzkiewicz, who has been charged by the Academy of Sciences of Cracow with drawing up a catalogue of the interesting architectural monuments of the country, was especially struck by the remains which he found at the little town of Zamow. Here there were, a hillock surrounded by ramparts and ditch, the ancient basement of a little wooden castle of the Middle Ages, and an early parish-church in stone, on the front of which was a large tower. These two monuments date from the xii century, and have great artistic value, especially the church, which retains its western front almost intact. The

Romanesque tower has a stone winding-staircase leading from the interior of the church to a balcony whose capitals are decorated with figures taken from the bestiaries. The primitive apse was replaced in 1510 by a remarkable Gothic choir showing the influence of the Cistercian monks.—*Chron. des Arts*, 1890, No. 8.

LENGYEL.—M. de Nadaillac made a communication to the *Académie des Inscriptions* (Jan. 10) on the last discoveries made at Lengyel, in Hungary, on the right bank of the Danube. Many habitations in the form of a bee-hive and two cemeteries have been recognized and excavated: the cemeteries show no traces of cremation. There were found not less than 12,036 objects, divided as follows: knives, rakes, various utensils, 4,680; axes of polished stone, 812; instruments of bone or horn, 833; various terracottas, 3,933; ornaments in shell-work, 957; objects in bronze, amulets, 241. It is quite difficult to fix exactly the date to which these discoveries go back, but the colors and ornaments of the terracottas approach sufficiently the colors and ornaments of Greek vases. Nevertheless, the forms are ruder, the patina is less fine, the baking is mediocre. The sepulchral vases have many resemblances to those found at Hissarlik, in the Caucasus, and even in Egypt. One may then suppose that the terracottas of Lengyel come from some Greek colony or at least from an Asiatic colony having had relations with Greece. As to the date to which these objects should be assigned, M. de Nadaillac thinks that they might be placed in the last period of the stone age.—*Cour. de l'Art*, 1890, No. 5; cf. *Revue Critique*, 1890, p. 60.

LITTITZ.—ANCIENT TOMBS.—On the left bank of the Radbusa, not far from Littitz (near Pilsen), eight ancient graves were opened. In them were found two small and one large vessel about a half-metre in diameter, as well as a large number of gold, iron and bronze ornaments and arms, all of which have been sent to the museum of Pilsen.—*Mitth. d. k. k. oest. Museums*, 1890, No. 3.

MONTENEGRO.

PODGORITZA.—REMAINS OF DIOCLEA.—It is reported from Cetinje that excavations near Podgoritzza, organized by Prince Nicholas in order to give employment to destitute laborers, have already brought to light the remains of the Basilica and the city-walls of Dioclea, the birth-place of Diocletian. Many important and interesting inscriptions also have been disclosed.—*N. Y. Evening Post*.

SWEDEN.

MANUFACTORY OF STONE IMPLEMENTS.—At Igelsta Bay, near Södertelge, has been discovered a place which is declared by Professor Hildebrand to have been a manufactory of stone implements during the stone age. This is the northernmost place in Sweden where flint implements have been found.

RUNIC INSCRIPTION.—A little south of the Göta canal, in the province of Skaraborg, has lain for years a Runic stone (10 feet high), which has been raised. The front bears an engraved cross somewhat like a Maltese cross, below which is the following Runic inscription: *Duar, Hatjkr, Haruadr, Rajetu, Stain, Ifjkr, Kunar, Fadur, Sin*: "They, Hating and Harvard, raised (this) stone after [in memory of] Gunas their father." On the back are cut the figures of a lion, a dog, and an undistinguishable animal.—*Am. Architect*, Jan. 25, from *London Globe*.

NORWAY.

GLOPPEN.—A burial chamber of the early iron age has been discovered at Gløppen on the west coast. It contained the remains of a large man, who, judging from hair and claws beside him, had lain on a bear-skin. There were also traces of woollen clothes, and the lining of the neck, woven with ornaments of animals, was well preserved. The most interesting find was the remains of a green and blue glass beaker, with fluted ornamentation. The man had worn a leather belt with two red stones of quartzite set in bronze, in which had hung a pair of scissors in a carved wooden sheath. Between the two belt-stones lay a curious object consisting of three pieces of wood linked together, like the modern "mind-puzzle." The latter, the beaker, and the ornamented dress-lining, are unique. All the objects are now in the Bergen museum.

Dr. A. LORANGE, of the Bergen museum, has just published a work on *The swords of the later iron age*. Dr. L., having cleaned these swords in the Bergen museum, found upon them Latin letters and certain marks: one of the commonest names upon them is that of Ulfberht. Dr. L. concludes that these swords were not, as hitherto supposed, made in Norway, but were imported from the Franks on the northwest coast of France.—*Am. Architect*, Jan. 25, from *London Globe*.

ENGLAND.

SAXON AND NORMAN DECORATION.—At meetings of the Archaeological Institute on March 6 and May 1, Mr. J. Park Harrison communicated a paper *On Anglo-Norman Ornament compared with Designs in Anglo-Saxon Manuscripts*. He said that Mr. Thomas Wright, in the first number of the *Archæological Journal*, drew attention to the importance of studying architectural details in early illuminated manuscripts for the purpose of identifying Saxon remains. Examples derived from the Cottonian MS., *Claudius, B. IV*, in the British Museum, and *Cadmon's Paraphrase* in the Bodleian Library, both dating from about the end of the tenth century, were shown by the above Saxon scholar to resemble

very closely work in early churches like Deerhurst and Stopham. Mr. Harrison had carefully reexamined the above and other Saxon manuscripts, illustrated with architectural designs, in the two libraries, as well as the admirable reproductions of pre-Norman illuminations and pictures in Prof. Westwood's great work, derived from sources less accessible. Numerous details were mentioned showing that there certainly were buildings of a type superior to the majority of the churches now styled Saxon. The result, in fact, supported the later views of Mr. John Henry Parker regarding Saxon architecture, namely, that it was more ornamented and advanced than Norman was at the time of the Conquest. The absence of ornament which characterized the new work appears to have been for many years enforced, though in time the native love of ornament reasserted itself, and combining with grander proportions produced the style which French archaeologists rightly designate "Anglo-Norman." The paper was illustrated by diagrams and numerous sketches, showing that English churches in pre-Norman times possessed many features which archaeologists in Normandy admit were not introduced into the two abbey-churches at Caen, or into Normandy much before the middle of the twelfth century, and then apparently from England. An accurate drawing of a capital in the choir of Oxford Cathedral, by Mr. H. G. W. Drinkwater, was exhibited by Mr. Harrison. There were features in it that are met with in illuminated manuscripts of the tenth century, and it may, therefore, possibly have formed part of Ethelred's church. Photographs were exhibited of Saxon churches which showed similar features. He believed that Britton's view, that the Normans, when rebuilding English churches on a larger scale, adhered, both from policy and choice, to the severe style of architecture they brought with them, was generally correct. Whilst, however, Remigius built the three great portals at Lincoln in identically the same style as the Conqueror's church at Caen, the narrow arches on either side, if of contemporary date, afford an early instance of the adoption of roll mouldings and ornamented labels such as occur at Stow, as well as in the picture of "Dunstan" in the Cottonian MS., *Claudius A 3*, the date of which is c. 1000. Numerous features derived from Caedmon's *Paraphrase* and other illuminated MSS. of the same period were shown to correspond with details in Anglo-Norman churches. In Oxford Cathedral this was especially the case. And as the weathering of the majority of the choir capitals contrasts with the sharper lines of the carving believed to be of twelfth century date, this, Mr. Harrison said, would appear to afford sufficient proof that the interlacing stalks and other peculiarities in four of them, and the acanthus foliage in two, a revival of which, according to Prof. Westwood, took place in the tenth century, belong to the period which documentary evidence would lead

one to select for them, viz., the beginning of the eleventh century. The "break of joint" which has been detected in the eastern half of the cathedral, and the fact that vaulting ribs were not contemplated when the choir aisles were built, point to the same conclusion.—*Athen.*, March 15, May 10.

AYLESFORD.—LATE-CELTIC CEMETERY.—At the March 27-meeting of the Society of Antiquaries (London), Mr. A. J. EVANS read a paper *On a Late-Celtic Cemetery at Aylesford, Kent*. This cemetery is of great interest as presenting a stage in sepulchral practice not hitherto noticed among the ancient Britons, as well as from the new class of native earthenware and imported bronze vessels brought to light. The graves were small pits in the flat earth, arranged in family circles, and each containing a group of cineraries and accessory vessels. Mr. Evans showed that the form of interment answered to that prevalent in a large part of Gaul at the time of the Roman invasions, and in a previous paper (see *JOURNAL*, IV, pp. 514-15) had already traced certain situla-shaped cinerary vases, through intermediary examples in Belgic Gaul and the Rhine district, to the Illyro-Italic or Old Venetian province round the head of the Adriatic. The bronze vessels which he now described included a *patella* and *oenochos* of Italo-Greek work, the first authentic instance of the discovery of such imported vessels in a British cemetery, though Mr. Evans showed that the custom of associating Greek and Etruscan bronzes with their sepulchral deposits was very widely spread among the Gallic tribes on both sides of the Alps. Among the bronzes of indigenous Celtic fabric discovered was a beautiful plated pail surrounded with a zone of animals and foliated ornaments in *repoussé* work, presenting the closest resemblance to the decorative work found in the Helvetian station of La Tène, in Switzerland. The fabulous animals depicted were, on the other hand, almost identical with those found on the coins of the Remi, from which Mr. Evans drew the conclusion that this *situla* had been manufactured in the Rheims district and imported into Britain. Two British gold coins were also discovered in the cemetery, of uninscribed types which occur indiscriminately on either side of the Channel, and which were, therefore, to be referred to some Belgic prince who reigned in parts of both Gaul and Britain. No single object of Roman origin was found in the cemetery, and from a general survey of the evidence Mr. Evans considered that the sepulchral deposits found must be ascribed to the century immediately preceding Caesar's invasion, and referred to the same Belgic invaders who seem at about the same date to have introduced the ancient British coinage. On the other hand, the presence of some ruder urns in the traditional British style, and of skeleton interments in cists on the outskirts of the cemetery, seemed to indicate the partial survival of the earlier inhabitants on this Kentish site. Altogether the conditions brought to light by these discoveries, and the

close connection that they presupposed between Britain and the Belgic parts of Gaul, suggested a comparison with that which subsisted between England and Normandy in the period that immediately succeeded the Norman Conquest.—*Athenæum*, April 5; *Academy*, April 12.

BRUMBY.—BRONZE SHIELDS.—Brumby is a hamlet in the parish of Frodingham, in the wapentake of Manley, Lincolnshire. In November, the workmen engaged in baring the iron-stone (which lies very near the surface) discovered the bronze coating of an ancient shield, probably Celtic. Very few of these shields have ever been found in Britain, and I believe that they are almost unknown on the Continent. Mr. Evans's *Ancient Bronze Implements* contains an account of all that were known when his book was published. The Brumby example is not quite like any of those described by him. Unhappily the workmen injured it with their picks, but it is still a very fine specimen. It is 2 ft. 2 in. in diameter, and is ornamented with 63 concentric circles, about three-sixteenths of an inch wide. The bronze is very thin. It is quite certain that it must have been mounted on something. The older antiquaries were of opinion that these thin sheets of ornamental metal-work were intended to be affixed upon a wooden foundation. It seems, however, more probable that a thick circle of ox hide was the material employed. It may be well to note that a few days after the discovery of the shield a large bronze spear-head of late-Celtic type was found near the same place.

In 1843 one of these bronze shields was found in Burringham moors, three or four miles from the spot where the Brumby shield was discovered. It had only 19 concentric circles, which were ornamented by many small knobs or studs.—EDWARD PEACOCK, in *Athenæum*, March 15.

BUXTON.—At the Feb. 6-meeting of the Arch. Institute (London), Dr. J. Cox exhibited some Celtic pottery, Samian and pseudo-Samian ware, flint flakes, bronze bangle and Roman fibula, lately found in Deep Dale Cavern, near Buxton, in Derbyshire.—*Academy*, Feb. 15.

CANTERBURY.—OPENING OF A XIII-CENTURY TOMB IN THE CATHEDRAL.—The tomb in the south wall of Trinity Chapel (at the east end of the cathedral) was recently opened. Its ridged roof (with marble heads in high relief) was lifted off, and underneath was found a stone coffin, and, on raising the coffin-lid, was disclosed the undisturbed remains of an archbishop, fully vested. The vestments were quite sound, excepting the woollen *pallium*, which had almost perished. With the body were the following objects: a beautiful chalice and paten, silver parcel gilt; a gold ring with an engraved emerald; the pastoral staff of cedar-wood, with three engraved gems in the knob; and some beautiful embroidery on the vestments. The body was left undisturbed; the objects of value were removed to the treasury in the Chapel Library. The body is thought to

be that of Cardinal Stephen Langton († 1228), or possibly that of Archbishop Hubert Walter († 1205).—*London Times*.

CORNWALL.—At the Feb. 5-meeting of the *Brit. Arch. Assoc.*, the Rev. W. S. Lach-Szyrma read notes on the recent discovery of a menhir, found built up as old material in the wall of Gulval church, Cornwall. It has a key pattern and two letters in Roman character worked in the granite of the country.—*Athenæum*, Feb. 15.

ELY.—At the Feb. 3-meeting of the Cambridge Antiquarian Society, Archdeacon Chapman read a communication and exhibited documents on the purchase of the manor and advowson of Mepal in the XIV century by the prior and convent of Ely, as witnessed by a series of parchments which are preserved in the muniment-room of the cathedral. The document of chief interest which he exhibited was a Computus Roll of a certain monk, William of Wysbech by name, presented to the chapter in the year 1361, which contained a detailed account of moneys which he had received and expended for the convent, in the purchase and mortification of the manor and church. By this account it was shown that only a small portion of the necessary funds were provided from the treasury of the house, the greater part having been voluntarily subscribed by the monks themselves and their friends in the neighborhood. The names of all the donors are set out at length with the sums which they gave; and special gifts are recorded of silver vessels, forks, cups, and mazer-bowls. Other documents, to the number of twenty-four, were also shown and described, by which were illustrated the several legal processes which had to be gone through, and the various transfers which had to be effected, before the requirements of the mortmain-acts of that time could be satisfied, and the property legally conveyed to the "dead hand" of the church.—*Academy*, Feb. 15.

LINCOLN.—At the Feb. 5-meeting of the *Brit. Arch. Assoc.*, Mr. M. Drury read a paper on a supposed Roman causeway at Lincoln. This consists of a deep concrete mass which has been traced beneath the course of the Roman road which still forms the southern approach to Lincoln. The positions of a vast number of Roman discoveries were indicated on a large map, and the finds were described at length.—*Athenæum*, Feb. 15.

LONDON.—**ROMAN COINS.**—At the April 17-meeting of the Numismatic Society, Mrs. Bagnall-Onkeley communicated a paper on coins found at Caerwent and Caerleon (*Venta Silurum* and *Ica* of the Romans), ranging in date from the reign of Claudius to that of Arcadius. The writer remarked that perhaps the most noteworthy fact in connection with the coins found in many thousands in that part of the country was the total absence from among them of any of Diocletian, their place being supplied by large numbers of those of the usurper Carausius.—*Dr. Evans*

read a paper on a small hoard of Roman coins found at Amiens, ranging in date from Gordian III to Allectus. The principal features of interest in this find consisted first in the presence in it of one of the extremely rare coins of Pacatianus, and, secondly, in the preponderance of coins of the British usurpers Carausius and Allectus in a hoard found in French soil.—*Athenæum*, April 26.

THE HOWARD VASE.—The British Museum has acquired a Greek vase long reckoned among the art treasures of Castle Howard. Though belonging to the decadence of Greek vase painting, it is interesting because of its bearing the signature of the artist, *Pythos* (Πύθος ἱπράφει), and because of the subject, which presents one of the Greek legends in a light till now unknown in the Greek literature which we possess. It is the story of Alkmena. Her husband Amphitryon has returned from the war: she has fled to an altar for protection: meantime Amphitryon and Antenor have piled up in front of the altar a pyre of wood and are proceeding to light it: Alkmena raises her hands and implores Zeus to help her. In the upper part of the vase appears Zeus; he first hurls his thunderbolts at Amphitryon and Antenor, and next sends a tempest of rain to put out the fire. The rain is indicated directly by a great rainbow enclosing a space thickly dotted with drops of rain, and indirectly by two Hyades above the rainbow, who pour down water from vases. Beside one of the Hyades is a figure of Dawn (Ἥως). The names of the various persons, except the Hyades, are inscribed on the vase. The vase belongs to a time when it was not uncommon for vase-painters to take their subjects from the dramas of Euripides, and it is thought that the source of this design was a lost drama of his entitled *Alkmena*, several fragments of which have been handed down by grammarians. In Plautus a storm is called an "Alkmena of Euripides." A similar scene was enacted in the case of Kroisos when Cyrus, having taken him prisoner, set him on a pyre to be burnt alive. Kroisos appealed to Apollo, to whose temples he had made so many valuable presents, and Apollo responded by a violent shower of rain, which had the effect of releasing Kroisos. That scene also occurs on a vase. The work in the Museum is unique as comprising a representation of rain. Most curiously, the garments of the Hyades, which are distinctly crimson, are spotted in white lines of dots, which, beyond a doubt, indicate drops of rain. The rainbow is banded in different colors.—*Athenæum*, March 8.

RESEARCH FUND OF THE SOCIETY OF ANTIQUARIES.—This society has resolved to raise a research fund, the interest of which shall from time to time be applied towards the expense of excavations—such as those formerly carried on at Silchester and Wroxeter—or in such other modes of advancing knowledge as the council may think fit. A total capital sum of £3000 is asked for, of which £1750 have already been promised.—*Academy*, March 15.

OLD MALTON PRIORY.—At the Feb. 6-meeting of the Arch. Institute (London), the Rev. Dr. J. Cox exhibited a vesica-shaped private seal of amber, mounted in a plain rim of silver, with a suspending loop attached. It was found in a stone coffin at Old Malton Priory. The lettering, somewhat rude Lombardic, shows it to be of the thirteenth century. The emblems engraved on the seal are a fish, a tree, a bird, and a lion. The legend runs thus: *Secretum signum fons piscis avis leo lignum*. The material of the seal (amber) makes this specimen of an ecclesiastical seal of peculiar interest, and it is at present believed to be unique.—*Athenæum*, Feb. 15.

SILCHESTER.—EXCAVATION OF THE ROMAN CITY.—At the Feb. 27-meeting of the Society of Antiquaries (London), was read a paper by Messrs. G. E. Fox and W. H. St. John Hope on the desirability of the complete and systematic excavation of the site of Silchester. After a brief description of the site, and of the results of previous excavations under the direction of the late Rev. Mr. Joyce, the writers pointed out the very small portion of the hundred acres forming the area within the walls which had been excavated, and the immense additions to our knowledge of a Romano-British city, its public and private buildings, and its inhabitants, which would be gained by a thorough and systematic excavation, by sections, of the whole of the site. A scheme for doing this by subscription, under the direction of the Society of Antiquaries, had been drawn up by the writers, and submitted by General Pitt-Rivers to the owner, the Duke of Wellington, who had been pleased to express his entire approval of it. The manner in which the excavations should be carried on was fully described, and it was suggested that the most desirable thing to do first was the entire excavation of one of the squares into which the city is known to be divided by lines of streets intersecting at right angles. Owing to the destructive effects of frost and rain, it was not proposed to leave anything permanently exposed after excavation, unless of a very special character, and then it would be roofed in. The owner and the tenant having already consented to the work, there is no reason why the excavations should not be resumed this summer. It was ultimately unanimously resolved, on the proposal of Professor Middleton, "That a systematic and complete examination of the site of the Roman city at Silchester is desirable, and that the Council be requested to consider the steps necessary for continuing excavations upon the spot."—*Athenæum*, March 8.

EAST YORKSHIRE.—EXCAVATION OF BARROWS.—At the Jan. 23-meeting of the Soc. of Antiq. (London), Rev. W. Greenwell communicated the results of his most recent excavations of barrows in East Yorkshire. These had confirmed his previous theory that bodies were always buried with the face toward the sun, and he had also found examples of inhumation and cremation in the same barrow. In one case the central burial was encir-

cles by a ring of stones within the mound. In one barrow a set of twenty conical jet buttons, probably for ornament only, were found lying down the front of the body; in another, four bronze axes of a make and condition far finer than any of this period yet discovered. But the most remarkable find was that of three round objects of carved chalk, found with the bones of a child of about six years old, and a drinking-cup of the usual type. Each object is covered with a series of patterns carved and incised, and has on one side a plain panel containing a very rudimentary representation of a human face. The tops are carved in imitation of lids, with circles and other devices. The meaning of these strange and perfectly unique objects has not yet been discovered. Pottery with the same rude face has been found at Hissarlik, and at Antiparos and other Greek islands, and it has been suggested that some objects exported from there were copied on these chalk things. Possibly, too, the face may have some unknown religious meaning. These and the other objects found by Mr. Greenwell clearly belonged to the early bronze period.—*Athenæum*, Feb. 1.

AMERICA.

UNITED STATES.

ARCHÆOLOGICAL INSTITUTE OF AMERICA.—The annual meeting of the Institute was held in New York, May 10, at Columbia College.

Increase of membership.—Professor Charles Eliot Norton presented the report for the past year, showing the largest increase in membership made since the formation of the Institute; the addition amounted to about three hundred members, chiefly in the West, but many also in New York. New branch societies had been organized at Chicago, Detroit, and in Wisconsin (at Madison), and a fourth was about to be formed at Cincinnati.

Publications.—Mr. Bandelier's volume treating of the archæology of the Southwest had been distributed, and Mr. Clarke's second volume on *Asses* was promised during the summer, as well as a pamphlet by Professor A. C. Merriam on *Telegraphy among the Ancients*, and the eleventh Annual Report.

Election of Officers.—Hon. Seth Low, President of Columbia College, was elected president, and has since accepted; Mr. Wm. C. Lawton, agent of the Institute, was named Secretary, with a salary of \$1500, on account of the increase in the duties and labor of the secretaryship. Professor C. E. Norton was elected Vice-President and Mr. Percival Lowell remained Treasurer.

The Excavation of Delphoi.—The main subject before the Council of the Institute was the proposed excavation of Delphoi. During the winter

and spring, an attempt had been made to raise the fund of \$80,000 required to purchase and demolish the modern village of Kastri, built on the site of Delphoi. This sum once secured it would be possible to carry on the excavations from year to year, with the annual fund of somewhat less than \$5000, which the Institute has pledged itself to contribute. Up to the present, the sum of between \$25,000 and \$30,000 had been subscribed in Boston and Cambridge; but, New York, Philadelphia, and the West had contributed nothing. The excavation of Delphoi should become as much an object of national pride and energy to us as that of Olympia was to the Germans. The Greek government has distinctly shown that it favors America by deferring the term for the raising of the fund from last January until June, and, now, by putting it off indefinitely, seeing that we have proved at least the seriousness of our endeavors by the amount we have already raised.

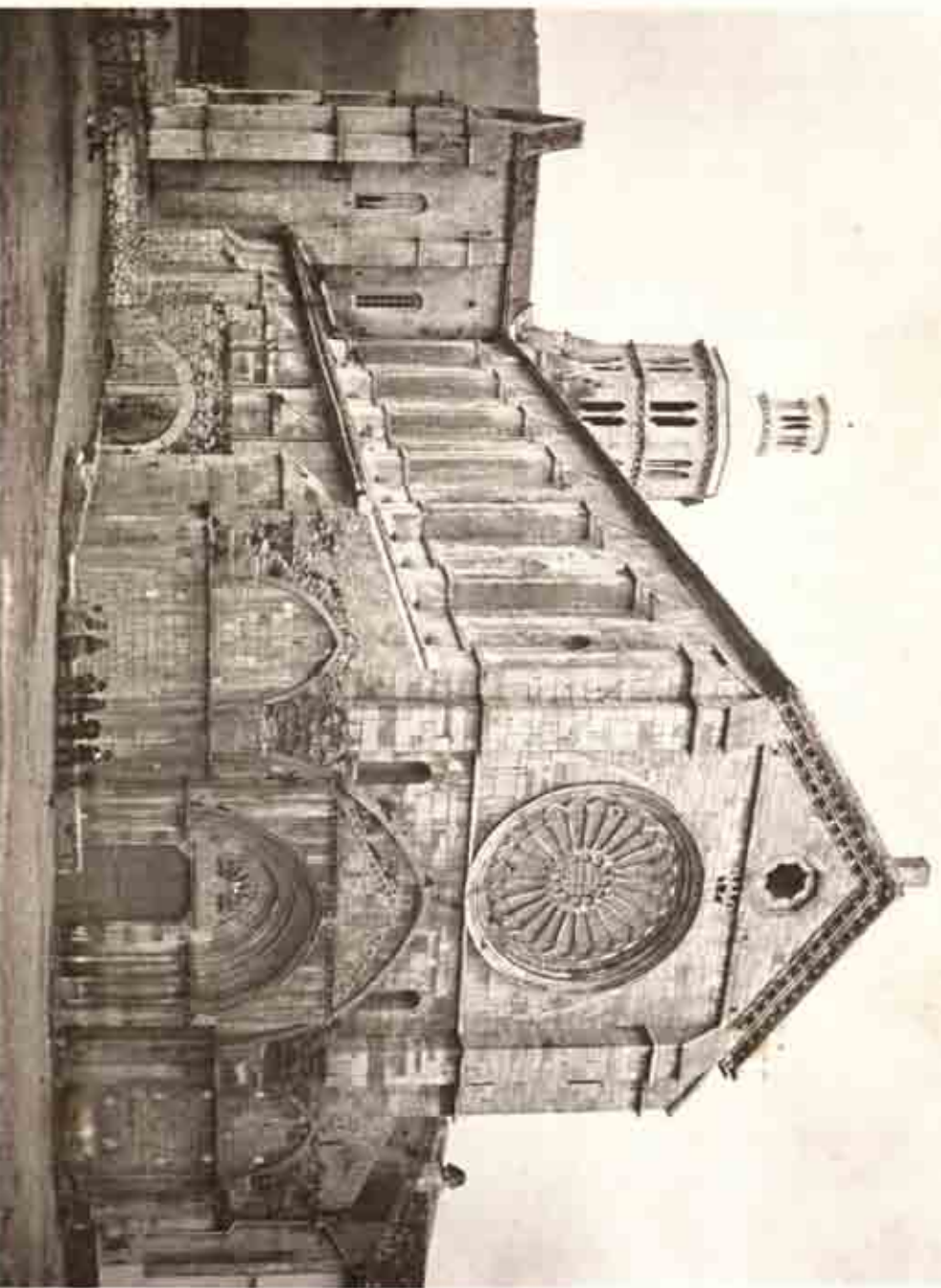
BOSTON.—OPENING OF THE ENLARGED MUSEUM OF FINE ARTS.—The Museum was opened in March. The collections in every department have been greatly increased, and now compare favorably with those of museums of art abroad as well as in America. In the number of casts of classical sculpture, the museum now stands third, the Berlin Museum easily leading the list with 2271, while that of Strasburg has 819, as compared with 777 in the Boston Museum. The Japanese collection is unrivalled and is likely to remain so, as a similar collection could scarcely be made in Japan, so depleted has it become of the best works of Japanese Art. The collection of glass, pottery and porcelain, while not large, is exceptionally fine, and the art galleries have now in their midst a room devoted to the Barbizon School, which has examples of the very highest merit. But, apart from the quantity of works exhibited, there are two things to be especially noticed in the Boston Museum under the new order of things, the fact that there has been exceptional discrimination shown in choice of material, and that the material has been extremely well arranged. This is especially manifest in the arrangement of the casts of classical sculpture, which is made chronological, and at the same time produces an increased artistic effect, as each room has a character of its own. The casts have cards upon their pedestals, stating not only the subject, but the date, the locality where found, the name of the sculptor, and the present locality of the original.

The additions to the building, begun by Mr. John H. Sturgis and completed by his successors Sturgis and Cabot, have been carried around three sides of a rectangular court of which the older building forms the north side and the additions the two ends and the south side. The walls of the court, which are in buff brick, reflect much light, and all the rooms are excellently lighted.

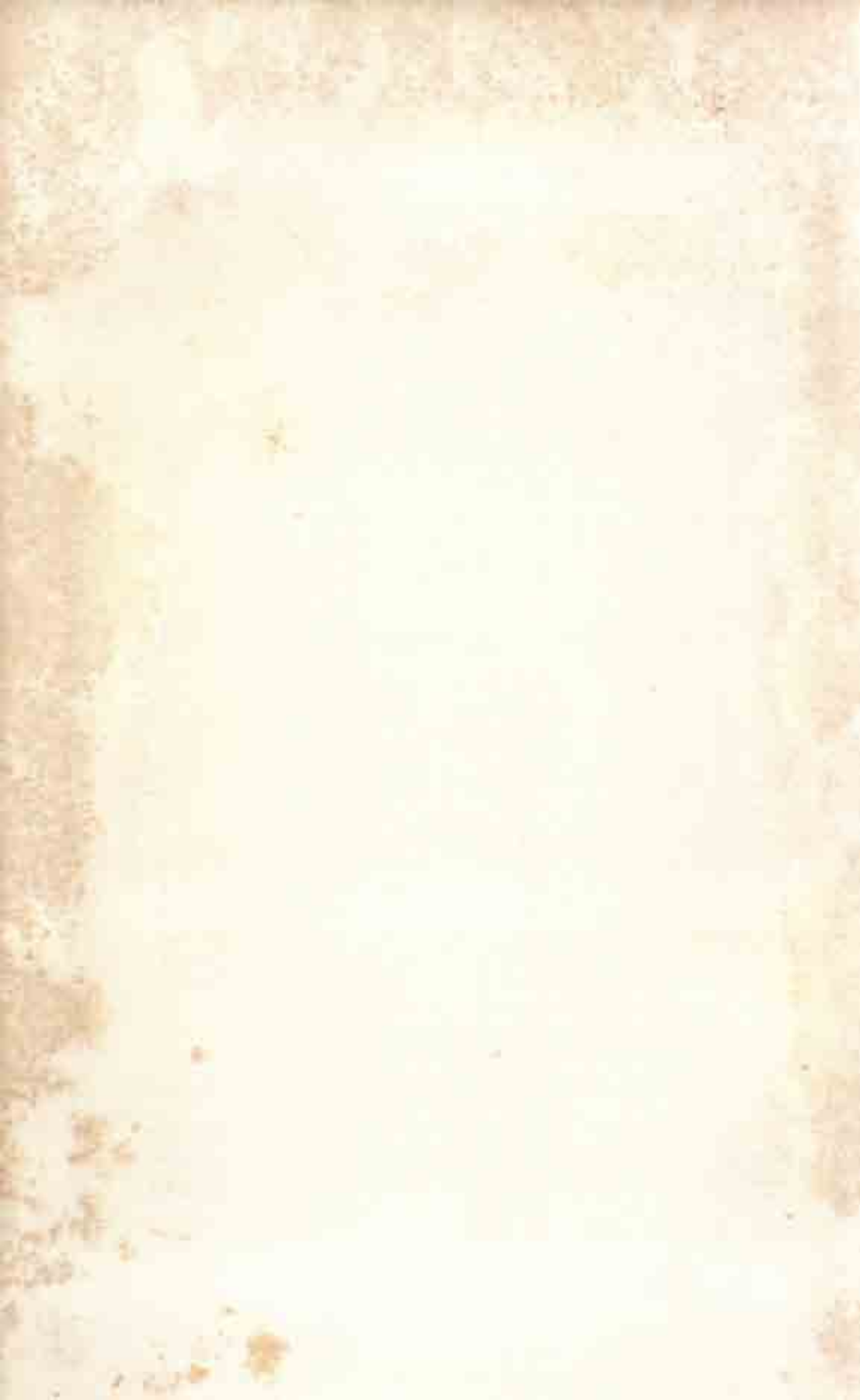
The entire first floor—with the exception of the two rooms, one for Egyptian antiquities and one for Greek, Roman and Etruscan antiquities—has been devoted to casts of sculpture, arranged, with the exception of the Renaissance rooms and the Egyptian rooms, by Mr. Edward Robinson, curator of Classical Antiquities.—*Amer. Architect*, March 22.

NEW YORK.—Professor A. C. MERRIAM, of Columbia College, whose epigraphic work, mainly published in this Journal, has made him widely known and appreciated by American and European scholars, has been appointed to a chair of classical epigraphy and archæology in the same institution.

A. L. FROTHINGHAM, JR.



MONASTERY OF FOSSANOVA. EXTERIOR OF CHURCH.





MONASTERY OF FOSSANOVA. PORTAL OF FACADE.



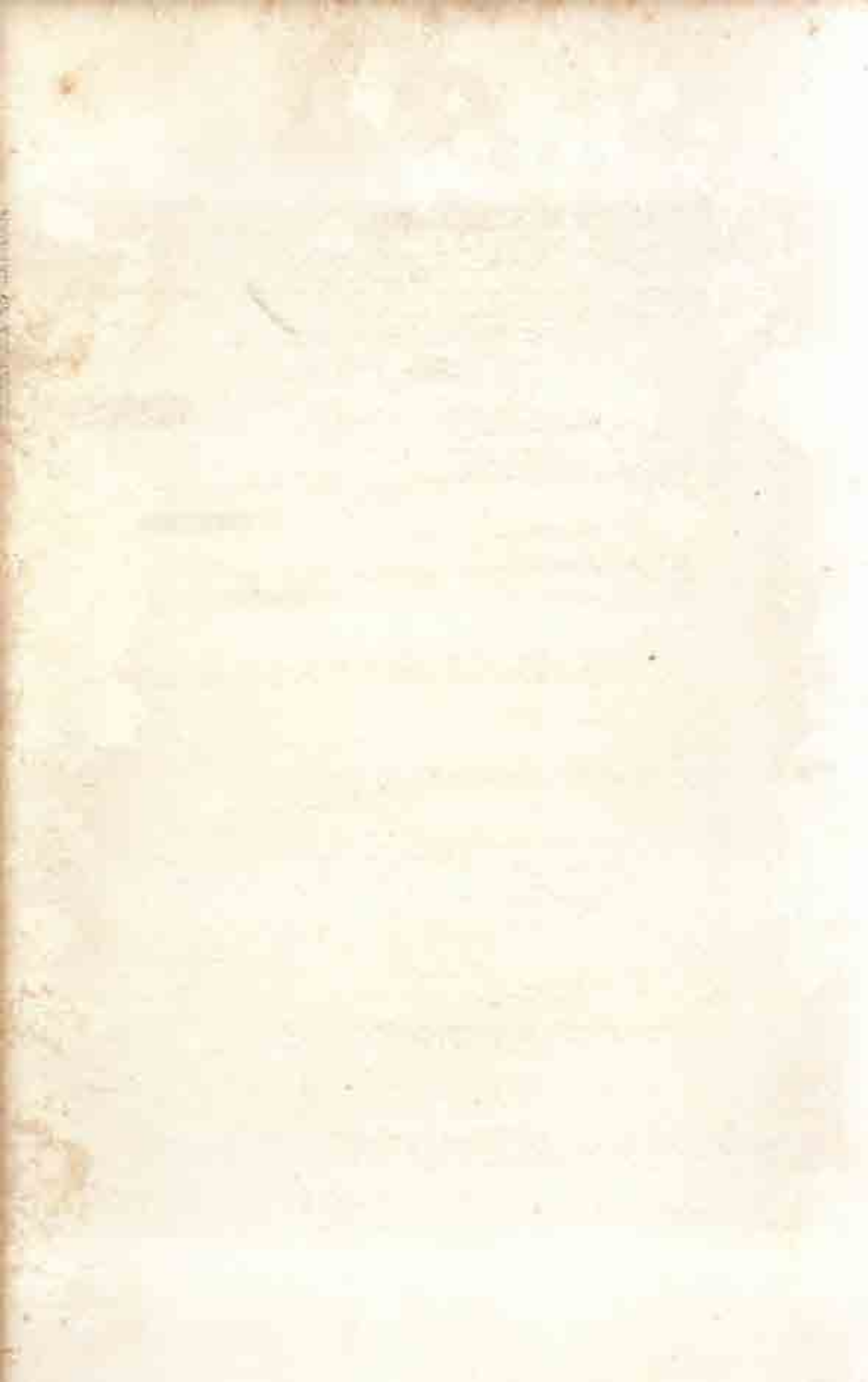


MONASTERY OF FOSSANOVA. INTERIOR OF CHURCH.





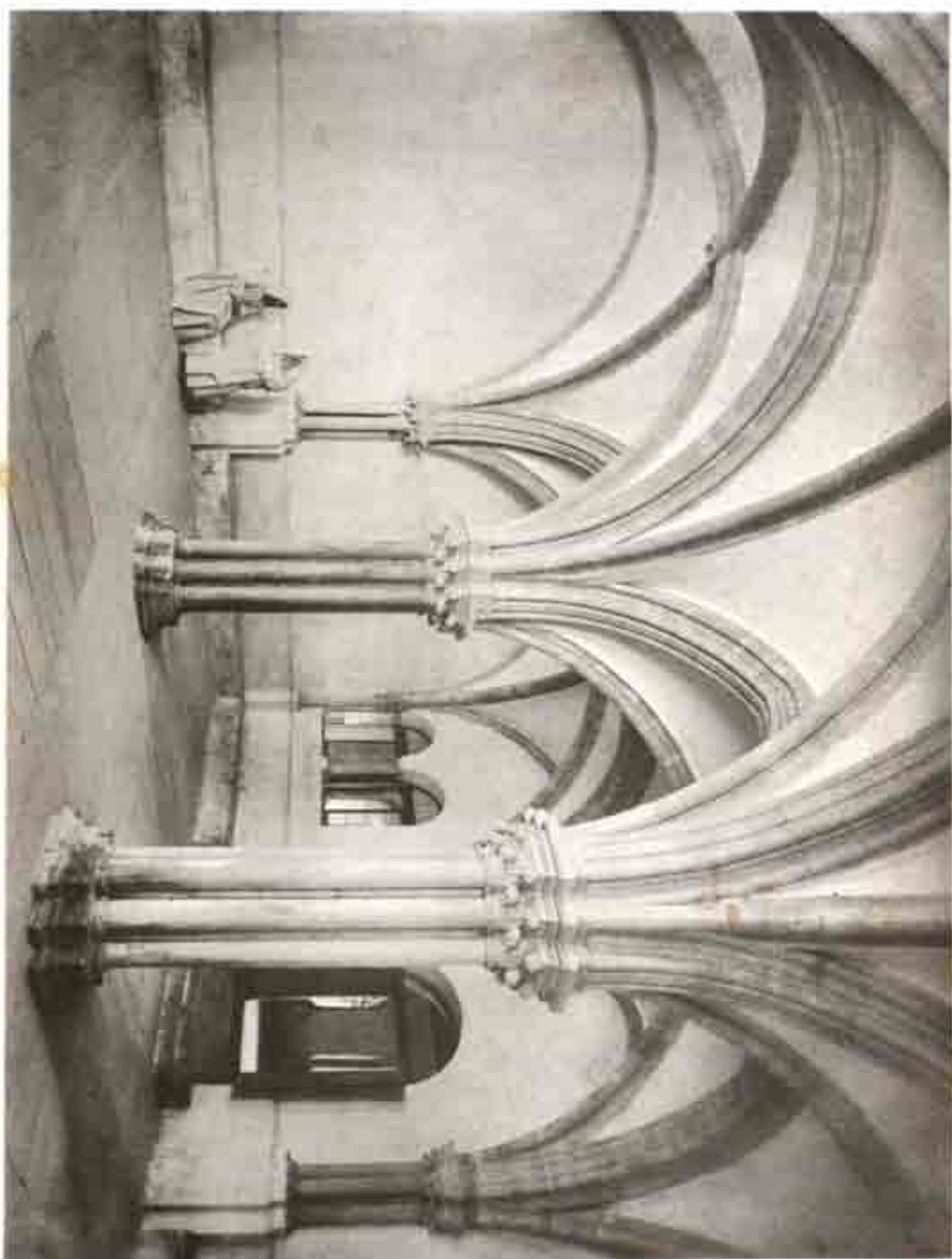
MONASTERY OF FOSSANOVA. INTERIOR OF CHURCH.



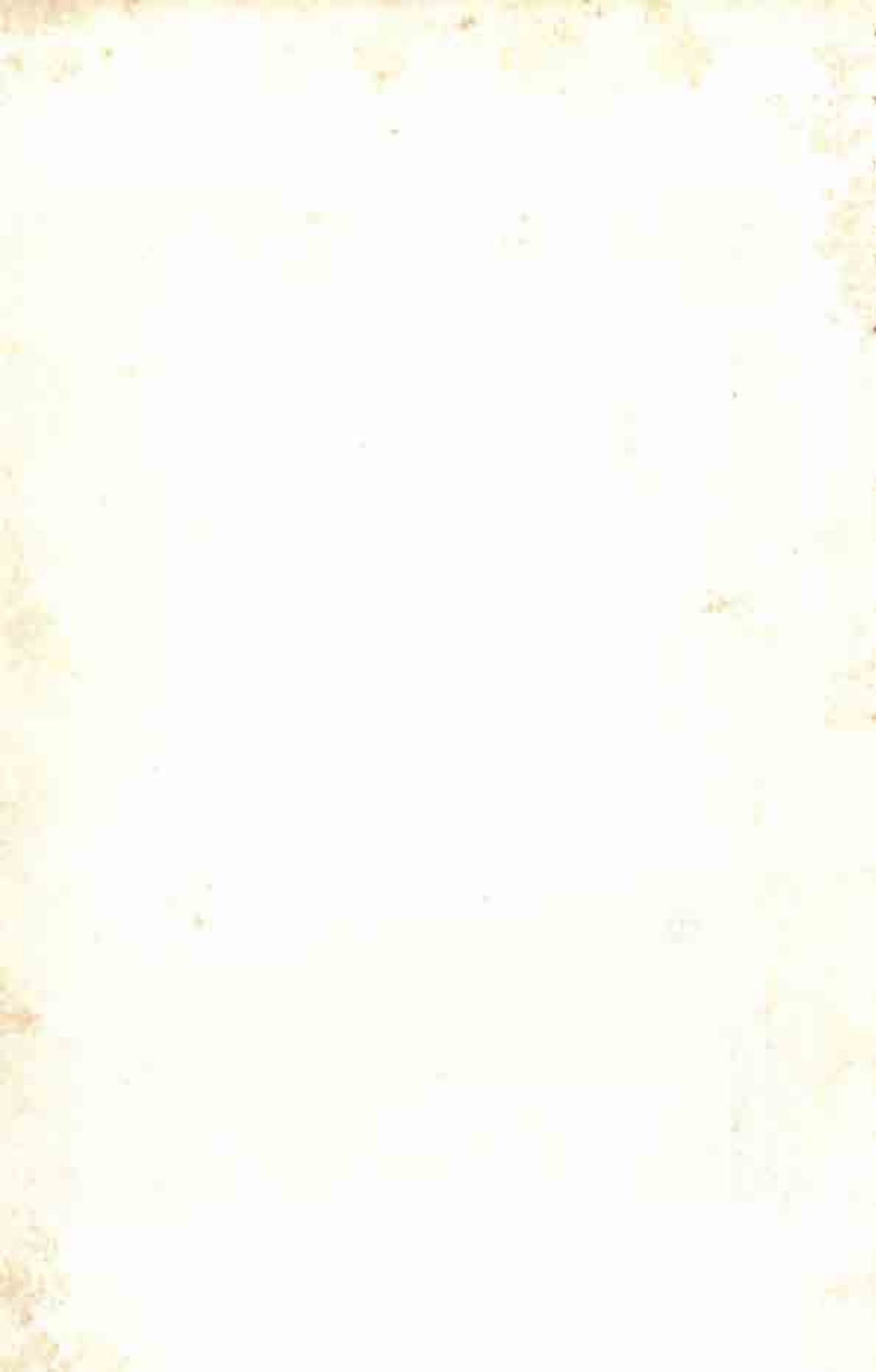


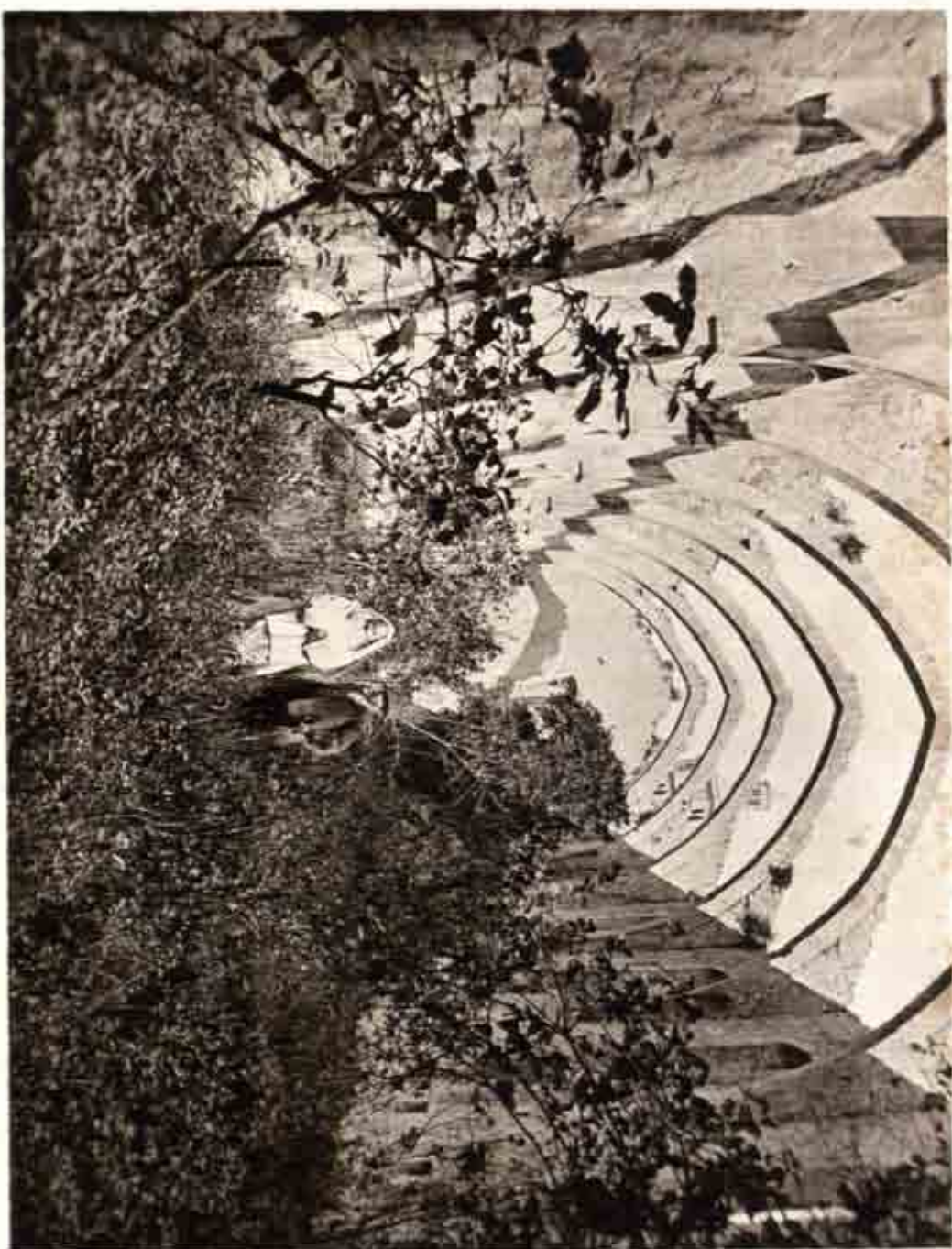
MONASTERY OF FOSSANOVA. CLOISTER.





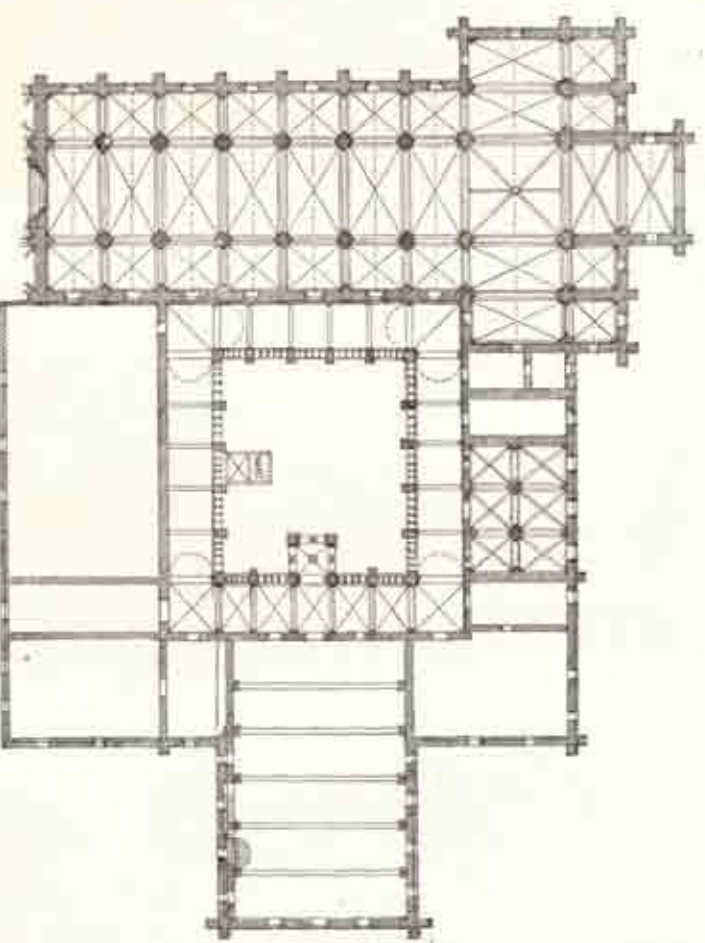
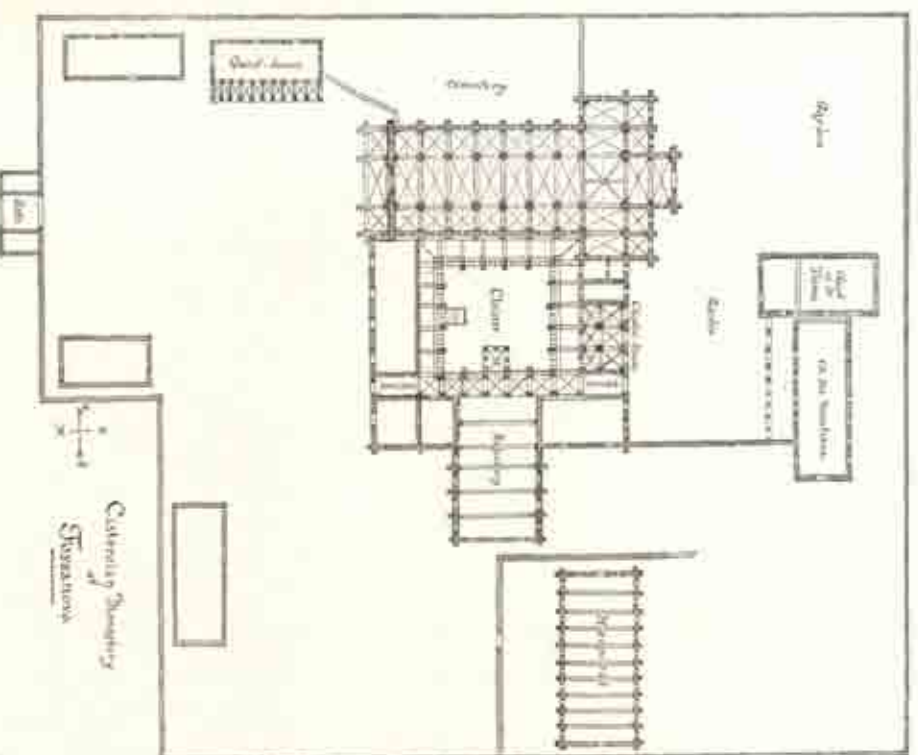
MONASTERY OF POSSANOVA. INTERIOR OF CHAPTER-HOUSE





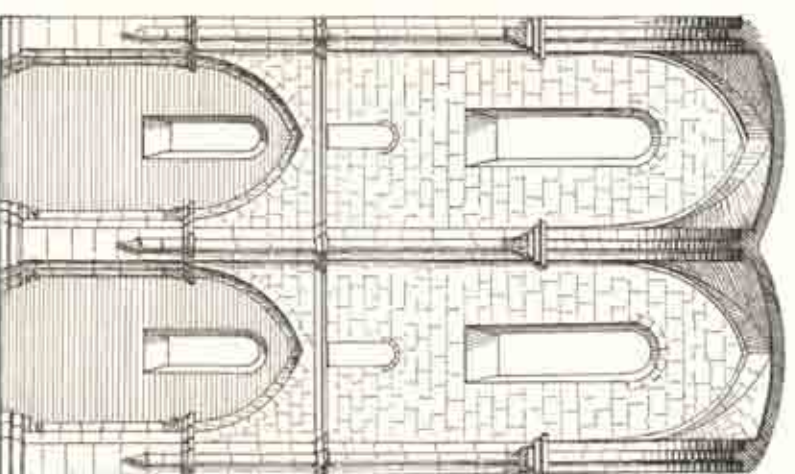
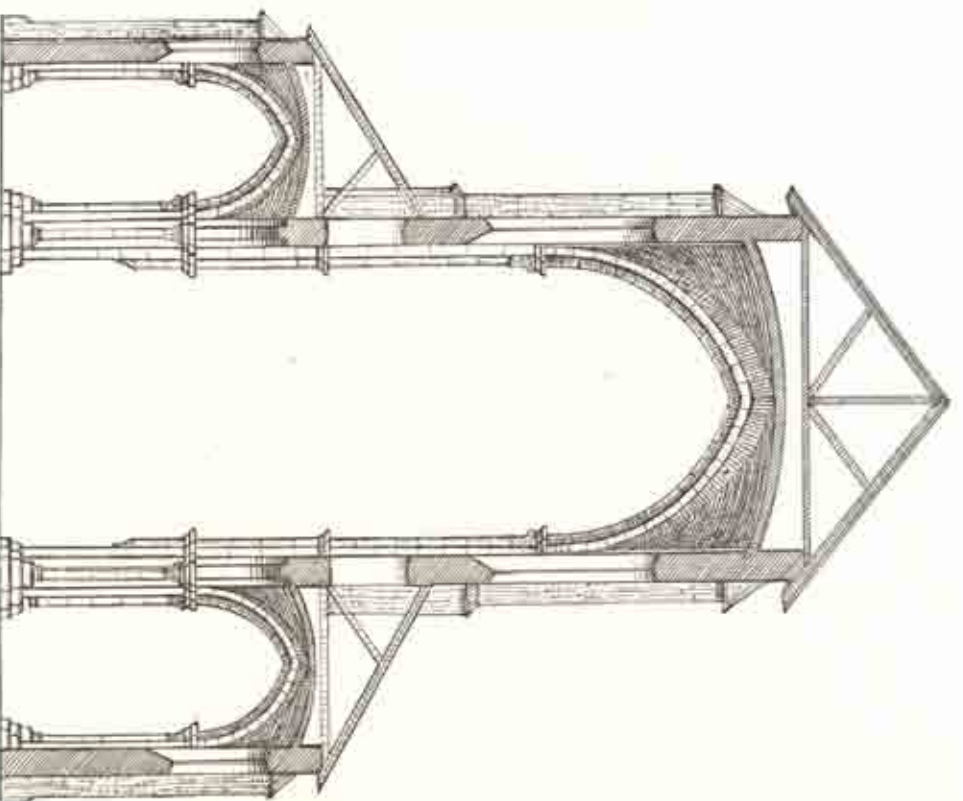
MONASTERY OF FOSSANOVA. INTERIOR OF HOSPITAL.





General Plan of Monastery

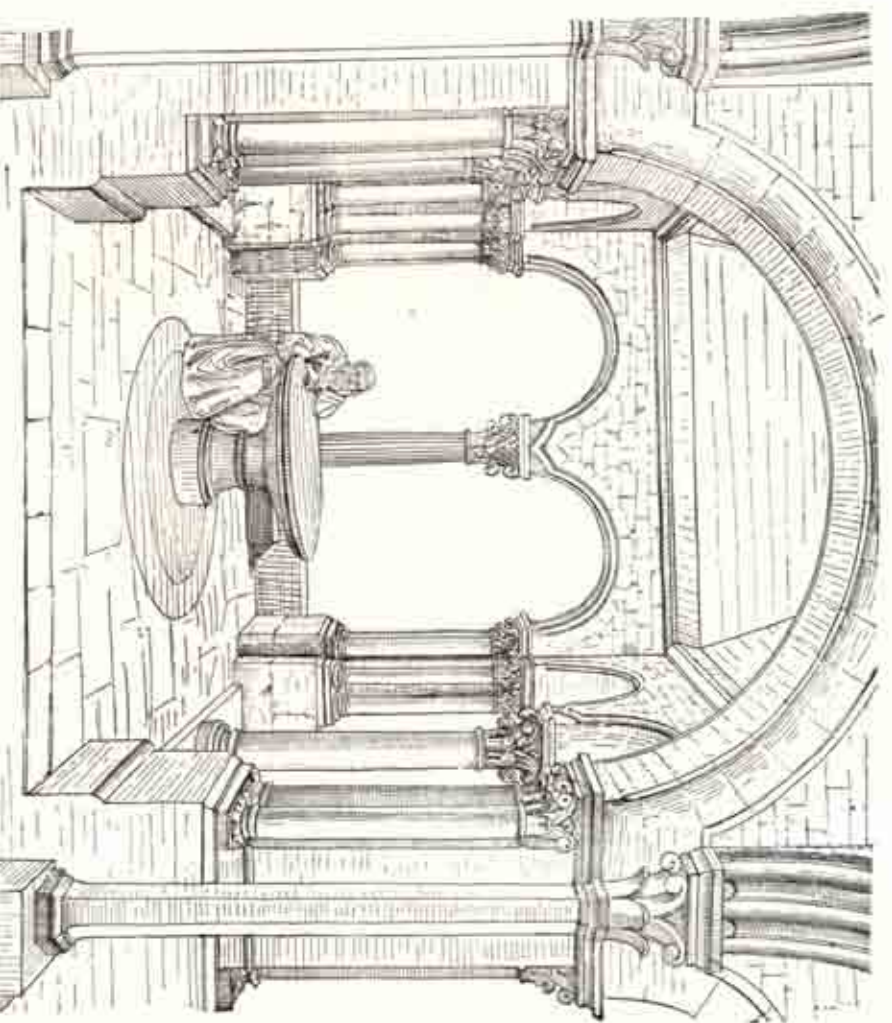
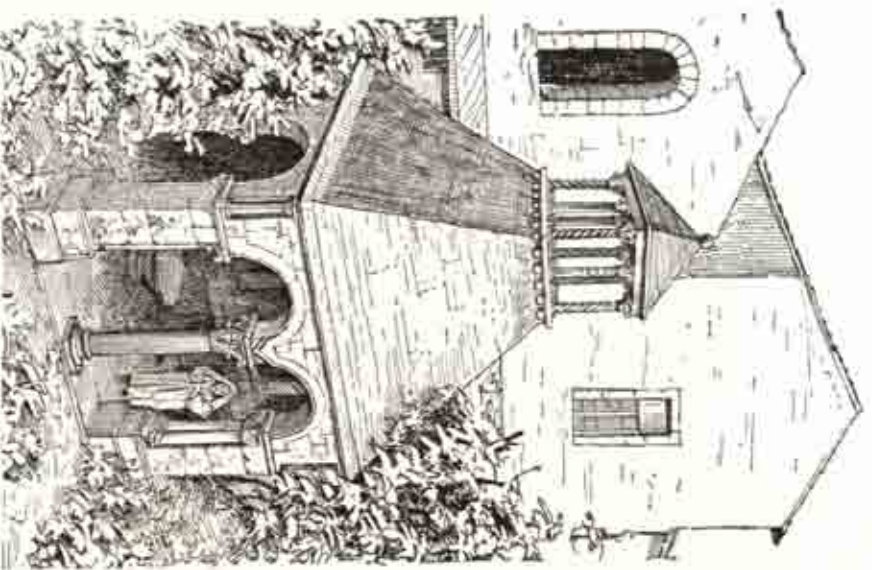
Plan of Church and Cloister



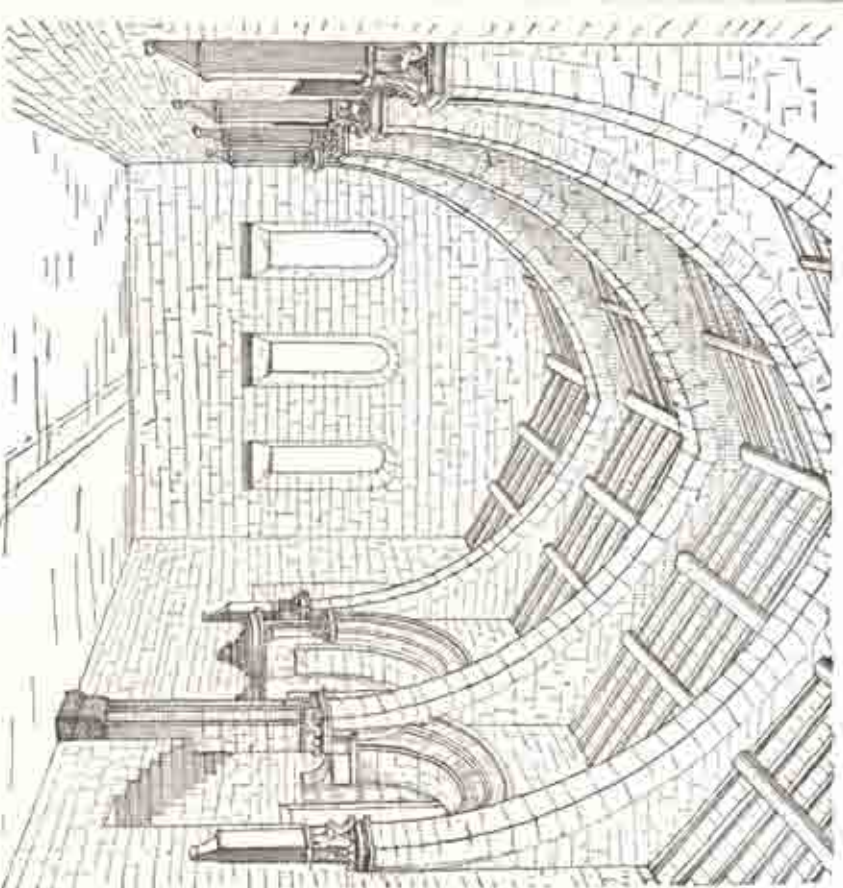
Cross-Section.

Boys.

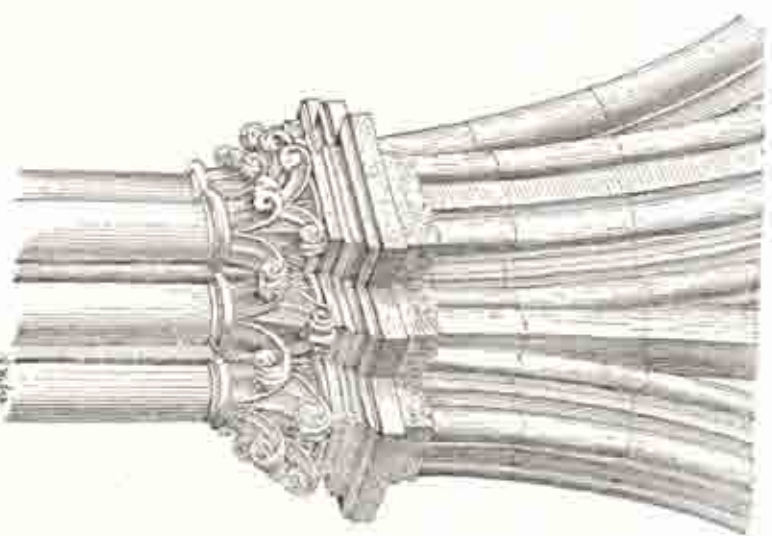
Capitals.



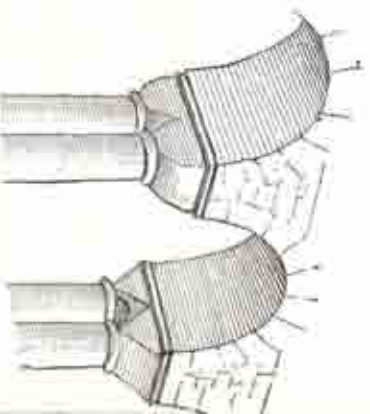
MONASTERY OF FOSSANOVA. EXTERIOR AND INTERIOR OF PAVILION, CLOISTER.



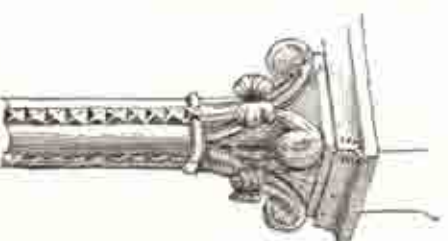
Interior of Hefesburg.



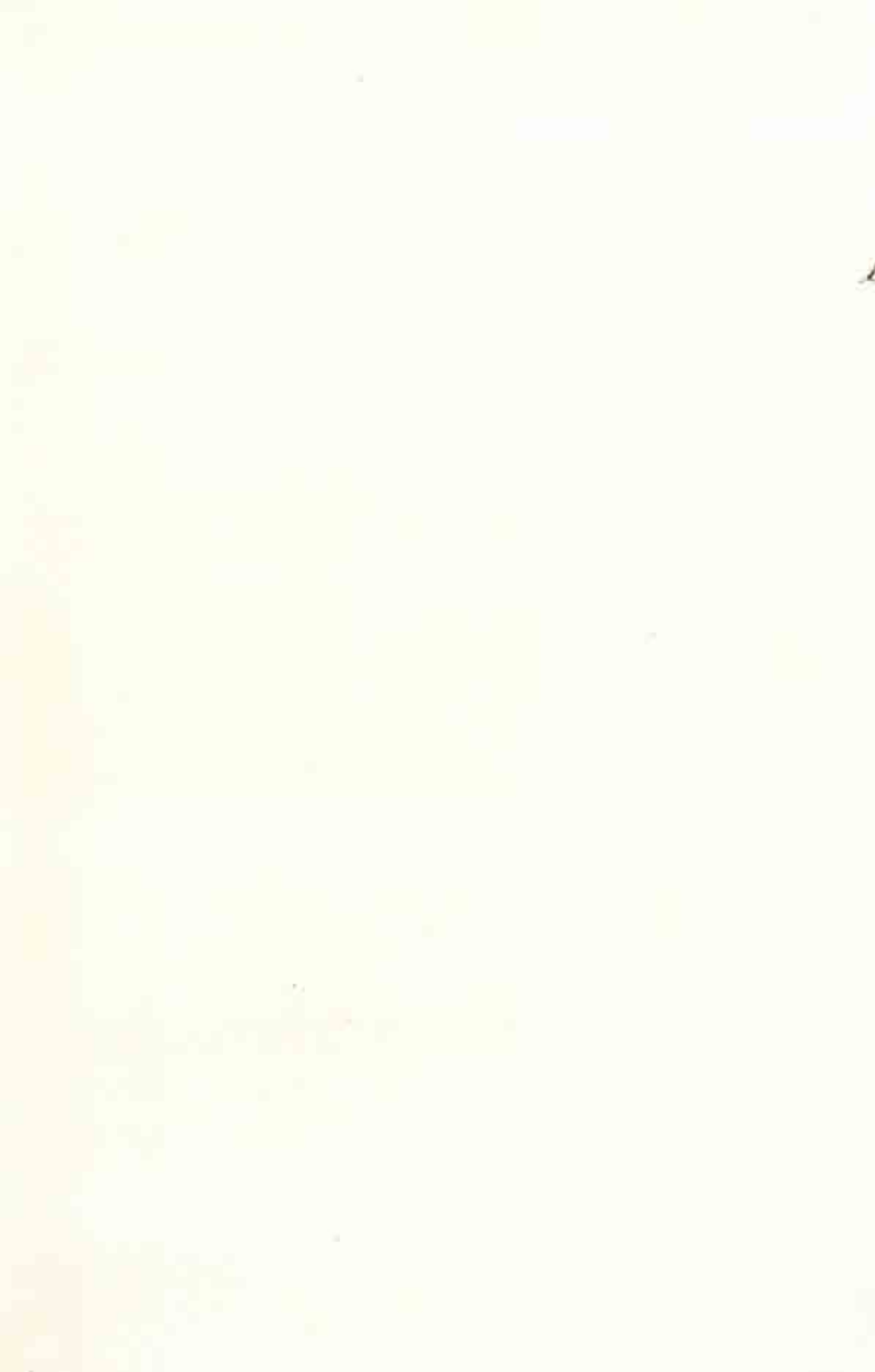
Pier and ribs of Choir of Mon.

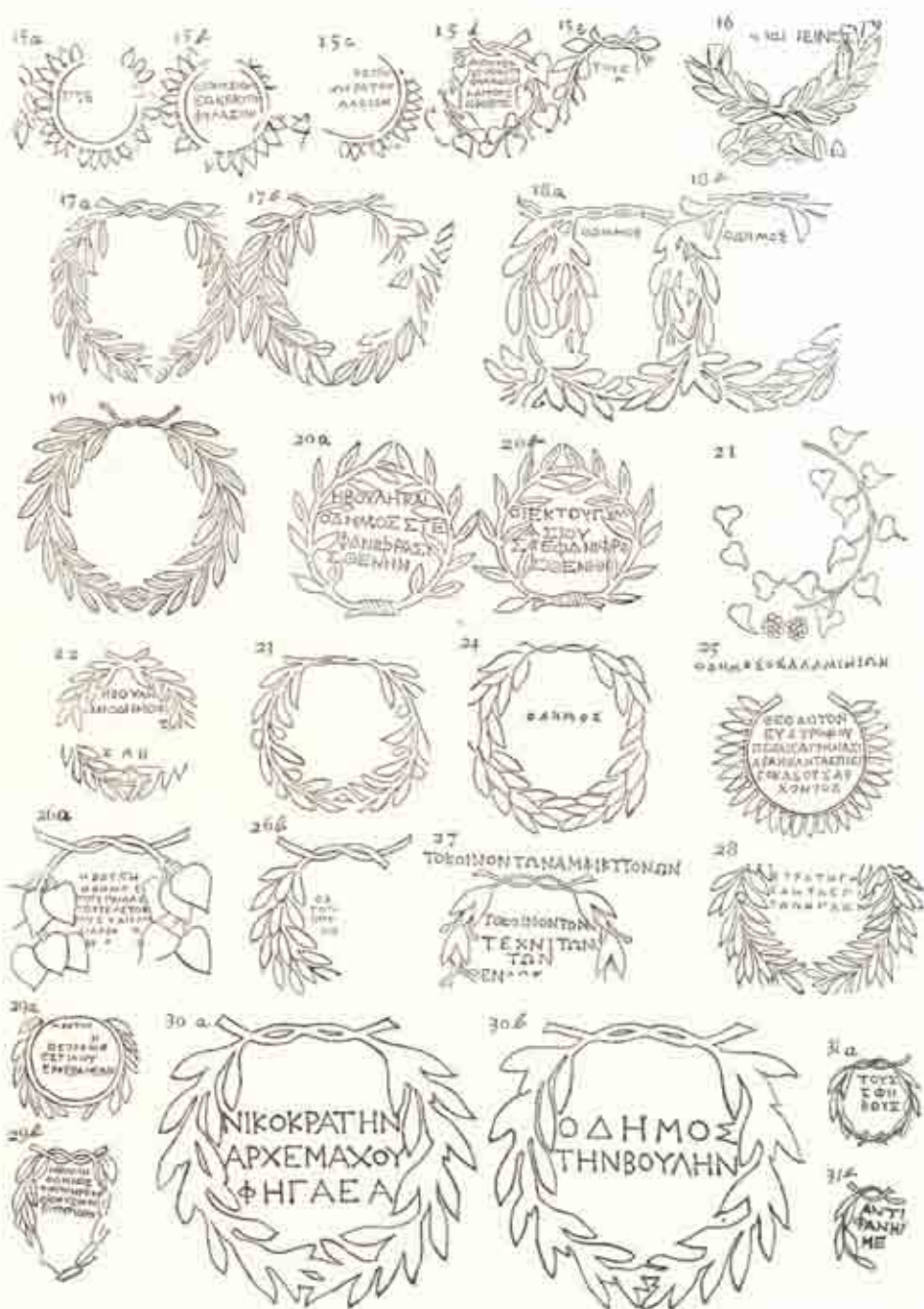


Capitals of old Choir.



Capitals of new Choir.



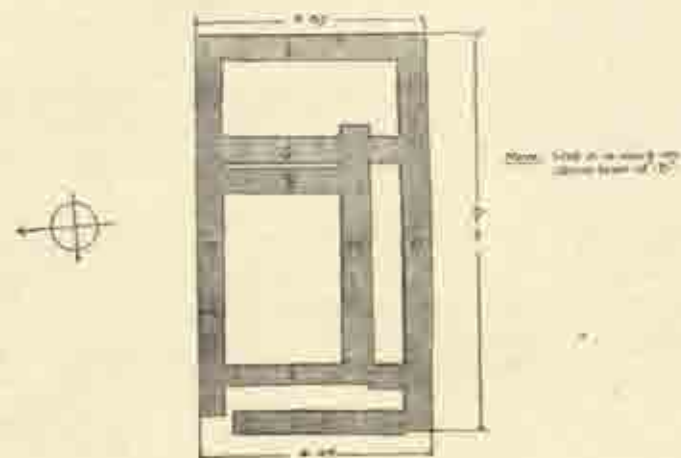


· ANTHEDON ·

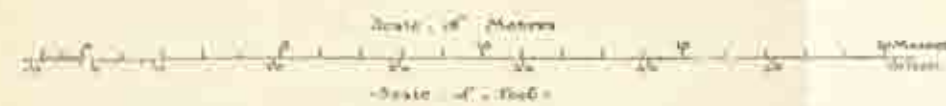
PLAN OF FOUNDATIONS BESIDE THE SEA.

- ANTHEDON -

PLAN OF FOUNDATIONS OF A TEAM II



1994-95 APAC 1995



Ground: fine, dry, sandy -
to thick with lots of pine
on top. Upper surface of
stone level of it.

where \mathcal{A}^{tr} -blocks

reducing room temperature

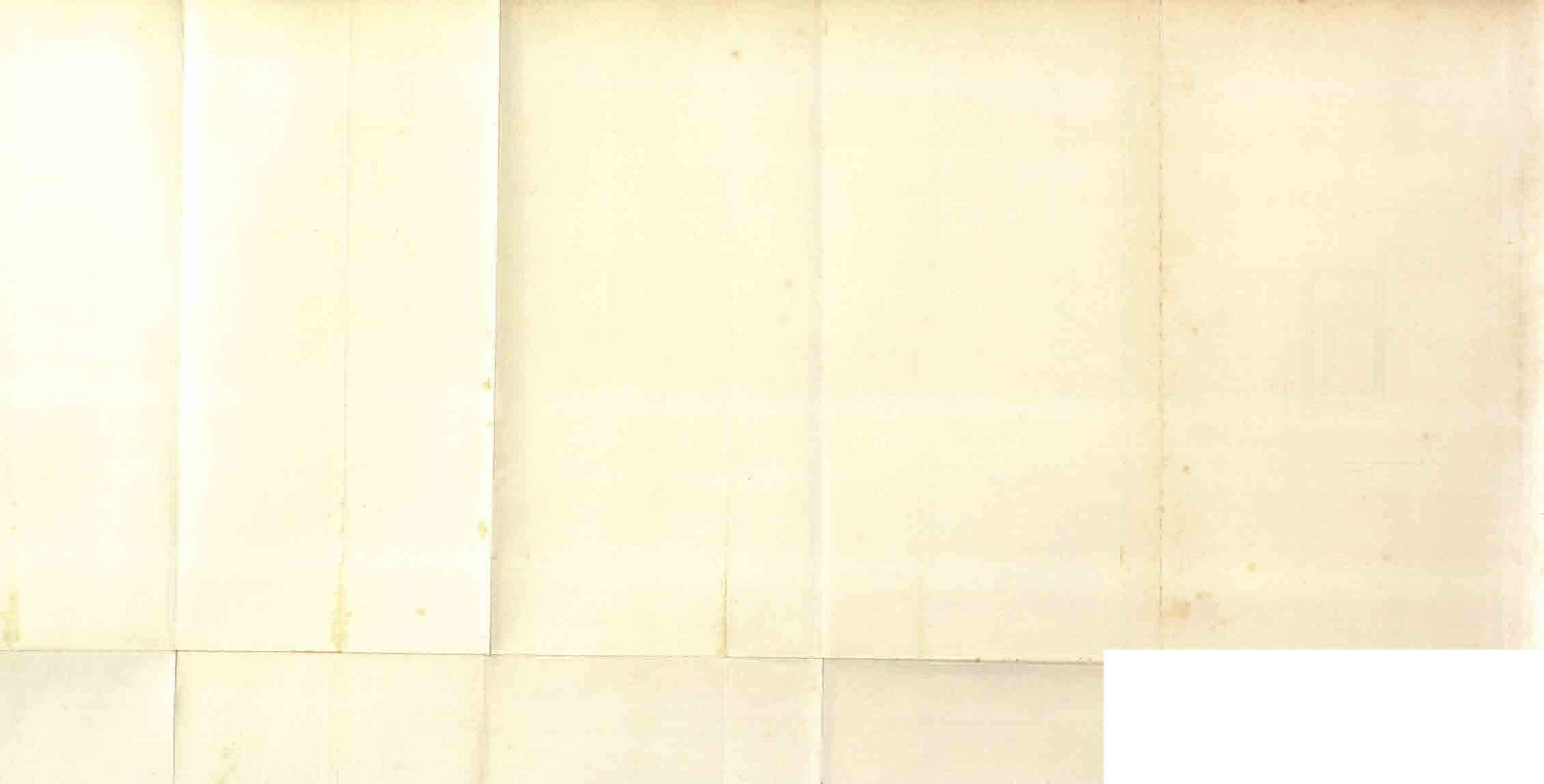
United States, 1875

Lower Tertiary blocks 3 are 40 thick.
 Upper 30 30 10 are 45 thick.
 Blocks 3 are 100 below level of rail st.

Time of death.

Light tan, smooth area of excavated surface.
Grey, tan, almost lustrous with white in (S) 107.

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ANTHEDON: BRONZE IMPLEMENTS FROM THE EXCAVATIONS OF THE AMERICAN SCHOOL.



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JOURNAL OF ARCHÆOLOGY

AND OF THE

HISTORY OF THE FINE ARTS.

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All literary communications should be addressed to the Managing Editor, Prof. A. L. FROTHINGHAM, Jr., Ph. D., Princeton College, Princeton, N. J.: all business communications, to the Publishers, GINN & COMPANY, Boston.

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REVIEW OF PAST WORK.

It has been the aim of the editors that the JOURNAL, besides giving a survey of the whole field of Archaeology, should be international in character, by affording to the leading archaeologists of all countries a common medium for the publication of the results of their labors. This object has been in great part attained, as is shown by the list of eminent foreign and American contributors to the five volumes already issued, and by the character of articles and correspondence published. Not only have important contributions to the advance of the science been made in the original articles, but the present condition of research has been brought before our readers in the departments of correspondence, and reviews of the more important recent books.

Two departments in which the JOURNAL stands quite alone are (1) the *Record of Discoveries*, and (2) the *Summaries of Periodicals*. In the former, a detailed account is given of all discoveries and excavations in every portion of the civilized world, from India to America, especial attention being paid to Greece and Italy. In order to ensure thoroughness in this work, more than sixty periodical publications are consulted, and material is secured from special correspondents.

In order that readers may know of everything important that appears in periodical literature, a considerable space is given to careful summaries of the papers contained in the principal periodicals that treat of Archaeology and the Fine Arts. By these various methods, all important work done is concentrated and made accessible in a convenient but scholarly form, equally suited to the specialist and to the general reader.

PROGRAM OF VOLUME VI, 1890.

Among the original articles will appear the following :—

Dr. WILLIAM HAYES WARD, of New York :

- I. *Hittite Sculptures.*
- II. *Oriental Antiquities.*

Professor WILLIAM M. RAMSAY, of Aberdeen, Scotland ;
Antiquities of Phrygia.

SALOMON REINACH, of Museum of Saint-Germain, France ;
Terracottas in American Collections.

Professor ALLAN MARQUAND, of Princeton ;
Reminiscences of Egypt in Doric Architecture.

Professor ADOLPH MICHAELIS, of Strassburg ;
Three heads of Zeus, Hades, and Poseidon, of the Hellenistic period.

A. S. MURRAY, of the British Museum ;
A Vase of the Mykenai type in New York.

Professor F. B. TARRELL, of Harvard University, and

Dr. JOHN C. ROLFE, of Columbia College ;
*Excavations and Discoveries made by the American School of Athens
at Anthedon and Thisbe, in Boiotia.*

Dr. GEORGE B. HUSSEY, of Princeton ;

- I. *Greek Sculptured Crowns and Crown-Inscriptions.*
- II. *Distribution of Hellenic Temples.*

Professor MARQUAND and Dr. HUSSEY ;
Norms in Greek Architecture.

Padre GERMANO, of the order of Passionists ;
*The early Christian Palace recently discovered under the church of
SS. Giovanni e Paolo, at Rome.*

EUGÈNE MUNTZ, of the Beaux-Arts, Paris ;
The Lost Mosaics of Rome from the IV to the IX century (II).

Professor A. L. FROTHINGHAM, JR., of Princeton ;

- I. *Cistercian Monuments as the earliest Gothic constructions in Italy.*
- II. *Roman Artists of the Middle Ages.*
- III. *Christian Mosaics.*
- IV. *Tombs of the Popes at Viterbo.*
- V. *Early-Christian and Mediaeval Monuments in Italy.*

NOTICES.

London Athenæum.—We have no hesitation in saying that no other periodical in the English language is so well fitted to keep the student who lacks time or opportunity to read all the foreign journals abreast of the latest discoveries in every branch of archaeology.

Göttingische Gelehrte Anzeigen.—No comprehensive account of the most recent discoveries exists, and the new American Journal can do most meritorious work and fill a deficiency which, since the time of Gerhard's death, has been often deplored by every archaeologist who had not the good fortune to be at the fountain-heads.

Philologische Rundschau.—We may expect that the American Journal of Archaeology will take an honorable position by the side of those already existing in Europe.

Bibliothèque de l'École des Chartes.—As we think it (the American Journal of Archaeology) is called upon to render real service, not only in the United States, but in Europe and in France, we take pleasure in announcing it here. The plan is vast and well conceived.

Archivio di Letteratura Biblica ed Orientale (Turin).—Periodicals are divisible into three categories: some have no pretensions to be classed as learned; some pretend to be but are not so in reality; others, finally, pretend to be and really are. The periodical which we announce (*The American Journal of Archaeology*) belongs to the last category.

New York Evening Post.—The American Journal of Archaeology will not disappoint the hopes of the friends of the science in America. If not well supported, it will be because there is little real interest in America in classical and mediæval archaeology.

Chicago Evening Journal.—*The American Journal of Archaeology* is alike creditable to the country and to the earnest and scholarly gentlemen who have it in charge, and we are pleased to know that it has already achieved an enviable reputation in Europe.

London Academy.—Mr. J. S. Cotton, at the annual meeting of the Egypt Exploration Fund (London, Dec. 22, 1887), referred to the *American Journal of Archaeology* and the *American Journal of Philology*, which he defined as being of a higher order of merit than any publications bearing similar titles in Great Britain.

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AMERICAN JOURNAL OF ARCHÆOLOGY.

Vol. VI.

SEPTEMBER, 1890.

No. 3.

THE HOUSE OF THE MARTYRS JOHN AND PAUL RECENTLY DISCOVERED ON THE COELIAN HILL AT ROME.*

[PLATES XVI, XVII.]

Of the many Christian monuments discovered during this century, especially in Rome, one of the most notable and precious, in the opinion of specialists, is the house, on the Coelian, of the saints John and Paul who suffered martyrdom under Julian the Apostate. It is now over three years since it began to come to light, through excavations made under my supervision, and since then its fame has been published everywhere.¹ This fame is not surprising, for the house of John and Paul, made sacred through their martyrdom and from the *confessio* erected there a few years after their death, is a monument unique both in Rome and elsewhere. In other cases, the early work has been more or less obliterated by mediæval restoration or decoration. But this monument preserves its original style and is, even now, almost as entire in its lower part as when the two martyrs lived in it and entertained devout pilgrims at the close of the fourth century.

* Translated from the Italian ms. by A. L. Frothingham, Jr.

¹ GATTI, *Bullettino della Comm. arch. com. di Roma*, 1887, pp. 151 sqq., 321 sqq.; DE ROSSI, *Bullettino di Archeologia Cristiana*, 1888-89, pp. 68 sqq., 89 sqq.; ARMELLINI, *Cronachetta*, Dec., Feb., 1888, April, May, June, 1889; LE BLANT, *Revue Archéologique*, 1889, p. 16, and *Acad. des inscriptions et belles-lettres*, Dec., 1887, pp. 466-71; ALLARD, *La science catholique*, Feb., 1888, pp. 177-90; BERING-GOULD, *Newberry House Magazine*, Aug. and Sept., 1889, pp. 166-76, 287-92; *Am. Journal of Archaeology*, vol. III, pp. 481-2; IV, pp. 115, 455-6. There have also been notices in the *Bulletin Critique*, the *Civiltà Cattolica*, the *Römische Quartalschrift*, the *Bulletin of the University of Innsbruck*, etc., etc.: not to mention numerous paragraphs in daily newspapers.

This discovery having therefore excited so much interest, it appears as if the time had come for me to give a full and detailed description of what has hitherto been discovered, thus completing the fragmentary notices I have from time to time published in various periodicals, and answering the expectation of many who have been eagerly awaiting the publication of the monument.

I. THE MONUMENTS OF THE COELIAN.

The Coelian hill of the Eternal City, though now a desert, was in Roman times closely peopled, and was called by Frontinus (*De Aquæeduct.*, II. 87) a famous hill: *Coelius et Aventinus celeberrimi colles*. When Augustus divided the city into fourteen *regiones*, the second was comprised in the Coelian, and on it, from the beginning, the most select portion of the Roman patricians had come to dwell. As I am about to describe a large and magnificent house in this *regio*, it may be well to first take a glance at the entire hill and its principal monuments and thus become better able to estimate what place among them was held by the house of John and Paul. It happens that no part of Rome has been so little studied or explored. Yet, there is no lack of records regarding it: there are enough of them in the classics, in the regional catalogues, and in monuments dispersed here and there, to furnish the basis of a successful study.

The hill extends from west to east in a long sinuous line between the Esquiline, the Palatine, the false Aventine, and the walls, with a circuit of between 1200 and 1300 feet. Nearly all the present streets of its inhabited section follow the lines of the ancient streets. They branch off from two main trunks, the street now called *Via dei SS. Giovanni e Paolo* and *San Stefano*, and the *Via dei SS. Quattro Coronati*. They cross the *regio* from end to end and converge before the Lateran hospital, where the ancient line of the Servian wall passed, and where, in the opinion of many, was situated the *Porta Coelimon-tana* mentioned by Cicero and Livy.¹ The street of SS. Giovanni e Paolo, which skirts the south wall of the house of these martyrs, was called, by S. Gregory, *Clivus Scauri*.² No ancient writer mentions such a street, but we know of this Scaurus M. Aemilius from Cicero,³ and from Asconius,⁴ who says that he had a house on the Palatine. He

¹ CICERO, in *Pison.*, ch. XXIII; LIVIUS, *Histor.*, lib. XXXIV. ch. 9; JORDAN, *Topog.*, II; PRELLER, *Die Region.*

² *Epist.* XIII, *Candido Ab.*, lib. VII.

³ *Orat.* pro M. Aem. Scauro.

⁴ *Comm.* in *orat.* cit.; MAZois, *Le palais de Scaurus*.

may have paved the street which then took its name from him. On the left side of the street, one of the façades of the house of the martyrs still stands almost intact with its portico and two stories of windows.

In the topographic catalogues we find distinct mention, on the Coelian, of the *Caput Africae*, the *Antrum Cyclopiæ*, the *Arbor Sancta*, the *Lupanarii* and the *Tabernola*:⁶ all these are certainly names of quarters or *vici*, but we are unable to identify them.⁷ In the *Caput Africae*, near the house of John and Paul, was situated the *Pædagogium puerorum Caesaris*, famous in many inscriptions,⁸ in which the imperial pages were educated for the various offices they were to hold.⁹

In the greater part of the higher streets of the Coelian, the rubbish from public and private buildings has but little raised the level of the soil, at least since the third century. Around the house of the martyrs the level is about the same as it was then, especially on the western side in the present botanical garden, where I have discovered, at a depth of only two decimeters, an external brick-pavement *a spina* and another internal mosaic-pavement, and, at a depth of 1.50 met., the virgin tufa.

The smiling slopes of the Coelian were adorned with many a rich temple and sacred shrine: such were the temple of Jupiter¹⁰ distinguished by the epithet *Coelimonitanus*; ¹¹ that of *Minerva Capita*; ¹²

⁶ URLICH, *Codex Urbis topographicus*, p. 2 *sqq.*

⁷ In regard to the *Caput Africae*, the excellent dissertation of Professor GATTI should be consulted in the *Annali dell' Istituto*, 1882, p. 192 *sqq.*; for the *Vicus ob Cyclopiæ*, consult GRUTER, p. DCXXI, No. 1.

⁸ *CIL*, VI, 5354, 5563, 7767, 8968, 8977, 8981, 8984, 8987, *etc.*

⁹ DE ROSSI, *Roma Sotterranea*, III, p. 292.

If Professor Gatti be not mistaken in finding the exact site of the *Pædagogium* in the present field of the Passionists, it is quite possible that we have the design of this important building in one of the fragments of the Capitoline plan. Long study and careful comparison have convinced me that the fragment on which is drawn the Neronian aqueduct with the title AQVEDVCTIVM (JORDAN, *Forma Urbis Romæ*, *tab. x*, No. 46) belongs to this part of the Coelian. Now, between the now-destroyed street of the *Naricella* and this aqueduct, where Gatti places the *Pædagogium* and where in fact was found the large base (now in the Capitol), with the dedication to Caracalla by the pedagogues of the *Caput Africae* (*CIL*, VI, 1052; FABRETTI, *Inscr.*, p. 296, No. 257; GATTI, *loc. cit.*), we see drawn a group of buildings which do not resemble either private houses or public monuments, but seem, on the other hand, to be well suited to a *gymnasium* such as was the *Pædagogium* on the Coelian (see *PL. XVI*).

¹⁰ MARTIALIS, *Epigr.*, *lib. VII* 15.

¹¹ GATTI, *Bull. Comm. arch.*, 1887, p. 314.

¹² OVIDIUS, *Fast.*, *lib. III*, v. 857.

that of *Hercules Victor*; ¹² that of Isis, ¹⁴ of the goddess Carna who presided over the guarding of the city-gates; ¹⁵ the shrine of Diana in the Coeliolus, ¹⁶ called by Cicero *maximum et sanctissimum*, ¹⁷ and many others, among which the temple of Claudius stands preëminent for position, size, and magnificence.

The secular rivalled the sacred buildings in number and splendor: such were the *stadia* for the circus and other games, of which the most noted were the *ludus matutinus*, the *gallicus* and the *dacicus*; ¹⁸ the martial field for the feast of the *equivia*; ¹⁹ the *mica aurea* for great banquets; ²⁰ the *thermae*; ²¹ the *tholus Caesareus* ²² or market of Augustus, one of the two great market-places founded in Rome as early as the first century, ²³ and many other similar buildings that it would be useless to enumerate. We have not retained a record of all the private houses on the Coelian, which are said to have numbered a hundred and twenty-seven, ²⁴ without counting the far larger number that were joined together so as to form distinct groups or *insulae*. ²⁵ Nevertheless, we can still, from the little we know, form an idea of the wealth of this hill in this respect. Julius Capitolinus is authority for the fact, that here was the palace of Verus, where Marcus Aurelius was born and educated. ²⁶ This prince so loved the Coelian that he would playfully call it "my hill:" *Mons meus Coelius*. ²⁷ Next to this palace were the *aedes Laterani* ²⁸ of the Plautius Lateranus who on his election to the consulate became an accomplice in the famous Pisonian conspiracy against Nero. ²⁹ Perhaps the Lateran basilica afterward rose on the site of this house. ³⁰

¹² MARINI, *Arsali*, I, *tot.* 3, p. 30. ¹⁴ TREBELLIVS POLLIO, in *Tetrico jun.*, *cap.* 24.

¹⁵ MACROBIUS, *Saturnal.*, *lib.* I, c. 12.

¹⁶ CICERO, *Orat. pro Arusp. respons.*, *cap.* 11.

¹⁷ *Ibidem*.

¹⁸ MURATORI, *Inscript.*, p. DCXX, No. 2, p. CCCLVIII; GRUTER, p. CCCXXXV; ORELLI, p. 2554; SEXTONIVS, in *Domitiano*, c. III.

¹⁹ PAULUS, in *Festo*, *lib.* XI; OVIDIVS, *Fast.*, *lib.* III, v. 519 *sqq.*; CATVLLVS, *lv.* 3; FESTVS, in *Equivia*.

²⁰ MARTIALIS, *Epigr.*, *lib.* III, 55.

²¹ CIAMPINI, *Cod. Vat.*, 7849; DE ROSSI, *Bullettino*, v, p. 60; LANCIANI, *I commentarij di Frontino*, p. 159; VACCA, *Memoria*, 22.

²² MARTIALIS, *loc. cit.*

²³ DION CASSIVS, *lib.* LXI, c. 18; ECKEL, *Doctrina num. vet.*, No. VI, p. 373.

²⁴ *Curiosum Urbis*; *Notitia*; ULRICH, *op. cit.*, p. 2, *sqq.*

²⁵ *Ibidem*.

²⁶ In *M. Antonino*, *cap.* I. ²⁷ *Epist. I Frontoni*, l. 2. ²⁸ JULIVS CAPITOL., *loc. cit.*

²⁹ TACITVS, *Annal.*, *lib.* VI, c. 40, 60; AURELIVS VICTOR, *Epist.*, c. 20.

³⁰ For the remains of the *Aedes Laterani*, consult VACCA, *Memoria*, §120; BLONDI, *Roma ristaur.*, *lib.* I, No. 85; NIBBY-NARDINI, I, p. 210; VENUTI, *Roma antica*, *lib.* I, 8; and the reports on the recent excavations made during the reconstruction of the apse of the Lateran Basilica.

The emperor Philip also resided on the Coelian, whom Eusebios asserts to have been converted to the true faith by his wife Martia Oracilia Severa, who openly professed Christianity.³¹ Pliny speaks of a Mamurra, a Roman *eques* and prefect of the blacksmiths of C. Caesar in Gaul, who dwelt in *Coelimonte* and, following Cornelius Nepos, he makes a minute description of his palace, saying that all its walls were covered with marbles, and that it was ornamented with heavy columns of finest marble; and he adds that this was the first Roman house in which such marble incrustations were used.³² A leaden pipe belonging to this house was found not long since with the inscription: VILL. MAMVRRANAE. Cicero and Valerius speak of the *aedes* of one Claudius Centimalis on the Coelian.³³ That of Junius Senator is mentioned by Tacitus, who says that, when the *regio* was burned, only a statue of Tiberius which was within this building remained uninjured.³⁴ Lampridius and Julius Capitolinus refer to the *aedes Vectilianae ad Coelium montem*, in which the unfortunate Emperor Commodus sought refuge and was killed by Narcissus at the instigation of Martia.³⁵ Most notable for its historic associations was the house of the Tetrici, called by Trebellius Pollio a *domus pulcherrima*.³⁶ It was situated in *monte Coelio inter duos lucos*, opposite the temple of Isis.³⁷ The story of the two Tetrici, C. Pesuvius and his son, was represented, says the above historian, in a beautiful painting which, in his time, was still to be seen in the house. C. Pesuvius was one of the thirty tyrants who arose in the reign of Gallienus.³⁸ In the *regiones* of Panvinio³⁹ we find, registered on the Coelian, the house of the Parthians, *domus septem Parthorum*, perhaps the dwelling of those princes that were sent from Parthia to Rome as hostages, according to Tacitus. The exact location of all these houses is quite unknown to us. So it is with the house of the poet Stella, of Caesar, of the hymn-writer Claudius Cliptus (all mentioned by Panvinio), with that of the prefect Symmachus, of which he himself speaks in a letter,⁴⁰ and with the many others whose names have not come down to us.

³¹ Hist. Eccles., lib. xv, c. 26.

³² PLINIUS, Hist. Nat., lib. xxxvi, c. 6.

³³ CICERO, Offic., iii; VALER., lib. viii, 2.

³⁴ TACITUS, Annal., lib. iv.

³⁵ LAMPRIDIUS, in Commodus, cap. xvi; JULIUS CAPITOL., in Pertinace, cap. v.

³⁶ In Tetrico jun., cap. xxiv.

³⁷ Ibidem.

³⁸ AURELIUS VICTOR, De Caesar., 35; VOPISCUS, Aurelianus, 31; TREBELLIVS, Trig. tyrann., 23.

³⁹ NARDINI, Roma ant., i, p. 186.

⁴⁰ Epist. xviii, lib. vii.

Better determined and more worthy of notice are the records of a number of notable Christians who dwelt on the Coelian: (1) the house of St. Clement, where this illustrious disciple and successor of St. Peter held the meetings of the first converts in times of persecution, and where, in the earliest years of the peace of the Church, was built the great Clementine basilica which was again brought to light not long since by Father Mullooly;⁴¹ (2) perhaps the house of the four martyrs called SS. Quattro Coronati, over which Pope Miltiades built in honor of these saints, early in the fourth century, the beautiful church which still remains;⁴² (3) the house of St. Faustus and that of St. Gregory, of which I will speak later; and (4) the house of the Valerii, contemporaries of SS. John and Paul. They were the descendents of the ancient Valerii Poplicoli, famous in the third century for nobility and greatness. About the middle of the fourth century, this illustrious family became Christian and left notable memorials of itself in the annals of church history. To it belonged Valerius Severus prefect of Rome in 382, a portrait of whom is the fine bronze found on the Coelian three years past with the inscription,⁴³ DOMINVS LEGEM DAT VALERIO SEVERO; also the sainted couple Piniannus and Melania junior, and several others, up to the fifth century.⁴⁴ In this house of the Valerii, there were built, at a later date, a free hospital, *zenodochium Valerii* or a *Valerii*,⁴⁵ and the monastery of Sant' Eras-

⁴¹ MULLOOLY, *Saint Clement and his basilica in Rome*, Rome, 1873; DE ROSSI, *Bullettino*, 1863, p. 25 *eqq.*; ARMELLINI, *Le Chiese di Roma*, p. 191.

⁴² ARMELLINI, *op. cit.*, p. 571. It is DE ROSSI's opinion (*Bull.*, 1863, p. 27), that the houses in which the faithful gathered in times of persecution, when they were, after Constantine, changed to basilicas preserved the name of their former owner. In case this owner had received, after death, the honor of sainthood, the basilica was consecrated to his or her honor and cult. In the early years of the peace, no church was dedicated in the name of a saint unless it contained the tomb or some other record of the history of the saint.

This observation may help others as it helped me in my discovery of the house of SS. John and Paul. In fact, the basilica of the SS. Quattro Coronati on the Coelian rises over the ruins of a Roman building which it would be well to explore.

⁴³ GARRUCCI, *Storia dell' arte cristiana*, *tav.* 469, 1, tome VI, p. 104; DE ROSSI, *Bullettino*, 1867, p. 27.

⁴⁴ DE ROSSI, *Bull.*, 1865, p. 45, 1873, p. 93, 1876, pp. 14, 54, etc.; *Inscript. Christ.* 1, p. 150, No. 340; *Roma Sott.*, III, p. 720; *La casa dei Valeri*, 1886; TILLEMONT, *Mémoires*, X, pp. 592, 603, 823, XIV, p. 233.

⁴⁵ BIANCHINI, *Vite Pont.*, in *Leamen III*, sect. 408 from *Cod. Vat. Pal.*, 1811; DUCHESNE, *Lib. Pont.*, I, pp. 456, 482.

mus near the basilica of San Stefano, built under Pope Simplicius in the fifth century.⁶⁰

II. SURROUNDINGS OF THE HOUSE OF SS. JOHN AND PAUL.

In the midst of all these classic and Christian edifices, the house of Saints John and Paul stood out finely on one of the pleasantest sites of the hill. Turning from the triumphal way at the foot of the Palatine, it is reached after climbing, for about a hundred metres, the steep ascent of the Coelian. It forms of itself a block or *insula*, and is surrounded by three streets: one along the northern front, in the lower garden of the Passionists; another on the east, leading from the present square of the basilica toward the Colosseum; the third is still open, under the name of *Via dei SS. Giovanni e Paolo*. The names of the first two are not known, but their existence is undeniable since the investigations I have made; the third is the already-mentioned *Clivus Scauri*.

As soon as Nero had brought the *Aequa Claudia* as far as the neighborhood of the garden of SS. Giovanni e Paolo, as Frontinus relates,⁶¹ this portion of the Coelian became one of the most notable parts of Rome. Innumerable buildings arose around the famous *nymphaeum* which this prince had erected to exhibit the waters, and to afford to the Romans a new and more accessible pleasure resort.⁶² Through a hundred mouths, pipes, and canals, arranged in order on the surrounding walls, the waters fell most effectively⁶³ from the heights of the artificial hill which is in front of the Colosseum, rising to a height of a hundred and twenty-five feet from the natural level, where at present stands the large garden of the *ritiro* of SS. Giovanni e Paolo. Fountains placed below them received the waters and sent them up again in showers and streams, whence they were carried off through subterranean pipes to the Neronian pool near by, *ubi amphitheatrum erigitur moles*.⁶⁴ When the Flavii destroyed the useless works of Nero, restoring Rome to herself and her citizens, as Martial says, the *nymphaeum* was not entirely abolished, and the charming play of

⁶⁰ DE ROSSI, *La basilica di S. Stefano e il monastero di S. Erasmo*: Roma, 1886.

⁶¹ *De Aequeduct.*, I, 20; II, 76; LANCIANI, *I commentari di Frontino*, p. 153 *sqq.*

⁶² CANINA, *Indice topografico*, p. 73.

⁶³ NIBBY, *Roma nel 1838*, I, pp. 6, 58; CANINA, *loc. cit.*; LANCIANI, *op. cit.*, p. 153.

⁶⁴ MARTIALIS, *De Spectac.*, Ep. II. The last remains of these fountains were excavated, on the site mentioned, in the time of Pius IV: see VACCA, *Memorie*, 22.

the *Aqua Claudia* continued, at least in part, in front of the house of our martyrs. The same may be said of the buildings which, restored to nobler use, continued to adorn the declivity around the house within the entire radius now occupied by gardens and vineyards.⁵¹ The Flavian amphitheatre was erected in the place formerly occupied by the pool, and, on the heights of the hill, Vespasian erected the temple of Claudius already begun by Agrippina and destroyed by Nero.⁵² In this way, the house of SS. John and Paul found itself in front of and almost contiguous to one of the greatest temples of pagan Rome, the *Claudium*, which with its *cella* and porticoes⁵³ occupied a rectangular area of three hundred and eighty-five square feet.⁵⁴

The grotto of the Neronian arches which discharged the *Aqua Claudia* was lengthened under Septimius Severus and Caracalla by another series of arches going from the *Claudium* to the Palatine.⁵⁵ These new arches were built along the road that passed by the north side of the house of the martyrs, in front of which they formed a new magnificent façade opposite its main entrance. They begin on the front of a grandiose monument which there extends from south to north on the right bank of the street that leads to the Colosseum. It consists of two superposed rows of arches built of large masses of travertine of a rich design in bosses, with cornices and friezes which are purposely left rough in their outlines and finish. The lower row is now entirely buried, through the raising of the level at that point where the hill falls abruptly toward the plain; eight arches remain above ground, two of which are half destroyed and covered up by modern constructions. Each has an opening of about three and a half metres and a height of nine metres from the ground to the upper moulding of the cornice (PL. XVII).⁵⁶ Several opinions, more or less arbitrary,

⁵¹ That what is here stated is true, has been proved by several excavations which I have here made. This may be deduced from the following inscription (CIL, VI, 1728, b): FL. PHILIPPVS. V. C. PRAEFECTVS VRBI | NIMPHIVM. SORDIVM. SQUALORE-FOEDATVM. ET | MARMORVM NVBITATE DEFORME. AD. CVLTVM | PRISTINVM. REVOCAVIT.

⁵² Suetonius, in *Vespasiano*, cap. x.

⁵³ Martialis, *loc. cit.*

⁵⁴ Aurelius Victor, *De Cesar.*, cap. ix; Canina, Nibby, *loc. cit.*; Jordan, *Topogrof.*; Preller, *Die Region.*; etc. A portion of the plan of this temple is designed on one of the fragments of the Capitoline plan (Jordan, *Forma urbis Romae*, tav. x, No. 45).

⁵⁵ Lanciani, *op. cit.*, p. 160.

⁵⁶ Nibby, in his *Roma nel 1838* (t. 658), refers to a third row of arches placed above these two. I cannot say whence he derived such information. It is certain that no trace remains of another story in this monument, which may be regarded as complete as it stands, for its two tiers of arches are architecturally symmetrical.

have been held by archaeologists regarding this monument.⁵⁷ In my opinion, it is nothing else than the terminus of the Neronian arches mentioned above. As this aqueduct was the only one built above ground within the city, there was every reason for giving it such a façade at the place where its waters were discharged.⁵⁸

Nothing can be said of the buildings that adjoined the house of SS. John and Paul on the side facing the Palatine, both because there is no mention made of them in classic writers and because the remains which I have uncovered there are too fragmentary to serve as a basis for conjecture. Such, however, is not the case with the side by which the *Clivus Scauri* passes. There was the paternal home of St. Gregory. It is well known that this descendent of the Anici, despising the vanities of the world, retired in the flower of his years to live a solitary life in a monastery built by him in his own house, of which records and remains still exist.⁵⁹ Somewhat further up and immediately opposite the house of John and Paul are still standing notable remains of a public building which all architects agree in considering the *Mansiones Albanæ*,⁶⁰ or the barracks of the soldiers that formed the regular garrison of the Alban mount.⁶¹ The building extended, on one side, to the Servian wall, on the other, up to the house of St. Gregory and above up to the square of SS. Giovanni e Paolo. To it belong, apparently, the arched niches, eight or more of which are still to be seen on the square itself, similar to those frequently found in large Roman constructions like the Palace of the Caesars and in several places on the Coelian itself. The house of the martyrs was joined to the above building of the *Mansiones Albanæ* by means of high galleries with a double arch like those found in the recent excavations of the Roman Forum on the *via nova* under the Palatine. Two of these flying galleries still remain in part (PL. XVII), the other intermediate ones that now exist have been several times repaired and made over

⁵⁷ For example, in the cited works of NARDINI, NIBBY, and CANINA, whose conjectures have passed as certainties in the greater part of modern guide-books of Rome.

⁵⁸ The *specchi* which I found above these vaults and the adjoining tanks or *piscine*, the direction of the Neronian arches toward this monument on one side and that of the Severian arches on the other, come in support of this assertion, which agrees with what FROSTINUS says, *De Aqueduct.*, i. 20; II. 74.

⁵⁹ JOHANNES DIACONUS, *Vita S. Gregorii*, lib. i; S. PETRUS DAMIANUS, *Opusc.* XIX; GIBELLI, *Memorie storiche della chiesa dei SS. Andrea e Gregorio*: Siena, 1888, §1.

⁶⁰ ULRICH, *op. cit.*, p. 35.

⁶¹ NIBBY-NARDINI, *op. cit.* i, p. 202; CANINA, *op. cit.*, p. 50.

in the Middle Ages. A second military station, also contiguous to the house of the martyrs, existed next to the one just described in the grounds of the present *Villa Celimontana*. Its real site was shown by the two important bases found there in 1820. It was the station of the fifth cohort of the *Vigili*, which was placed there to defend the Coelian and the neighboring region of *Porta Capena*.²²

For the sake of brevity, I shall abstain from any further considerations, for enough has been said to serve the purpose of showing what were the surroundings of the house of SS. John and Paul. Although this house was not situated on one of the highest points of the hill, its unusual size and isolation made it command the surrounding buildings. Its height, of about 15 metres above the street, gave an enchanting view. Below, rose the palace of the Caesars as a second miniature city on the little Palatine mount; to the right, a part of the Forum with its majestic temples and splendid porticoes; the Capitol, the Colosseum, the baths of Titus and of Trajan, and the numberless buildings of the Esquiline, on the north. Eastward was the temple of Claudius, high up on the hill, surrounded by a forest of columns, the buildings of the *Caput Africae*, the circuses, the shrines, and the military stations. Then, southward, as the hill slopes down to the valley between the Esquiline and the Aventine, the eye wandered over houses and palaces, over the walls of Aurelian, along a broad horizon limited by the Latin hills; the Ostian, Appian, and Latin ways, rich with gorgeous tombs, lined the valley below, filled with numberless patrician villas in the midst of beautiful gardens and parks. But, of all this, nothing now remains but ruins and a desert and some modern structures. Alone, the house of SS. John and Paul still stands as a remnant of the by-gone splendors of the Coelian.

III. HISTORY OF SS. JOHN AND PAUL AS CONNECTED WITH THE HOUSE ON THE COELIAN.

Historic and archæologic documents unanimously inform us that John and Paul lived in the middle of the fourth century from the reign of the great Constantine to that of Julian the Apostate. Their *gens* is unknown, for their birth-names have not been preserved, but only their Christian name or *agnomen* which, according to custom, they probably received at the time of their baptism.²³ It is certain

²² *CIL*, VI, 1057. KELLERMANN, *Vigilum roman. latercula duo coelimontana*: Roma, 1835.

²³ THEODORETOS, *Serm. VIII in fine*; EUSEBIOS, *Hist. Eccles.*, c. XXV; CHRYSOSTOMOS, *Hom. XXI in Genes.*, *Hom. de S. Melet.*, *Con. Nicen.*, can. XXX.

that they were persons of much importance and high repute at the imperial court in the time of the Constantines. It would seem that they at first followed a military career, in which they were very successful, and were then admitted to the imperial court as high officers: *olim romulei servantes moenia regni, Barbaricos strarunt saepe mucrone globos*, as Florus of Lugdunum⁶⁴ writes; and as we read in an antiphony of the ancient liturgy: *sub Constantino Augusto militantes, fidem Christi suscipere meruerunt*.⁶⁵ In the paintings that were made of them in various times and places, they are always represented in military garb, and hence came the usual opinion of the vulgar, that they were never anything but soldiers. However, in a fresco found in their house, they are dressed in the palatine robes of officers of the palace, such as were worn in the Byzantine period.⁶⁶ When, in 330, the imperial court was transferred to Byzantium, it is to be supposed that the two illustrious courtiers followed their prince to the new capital and remained there more or less regularly at their post up to the accession of Julian. This opinion is made almost a certainty from the sum of the facts recounted in the *Acts* of these martyrs, and because we know that Julian, after having been saluted emperor, never again set foot in Rome. Among the many *amphorae* for private use found in the house on the Coelian, there is one of singular importance for the signs upon it, which show that it contained wine from Greece and that the sender was a Christian. Comm. De Rossi, in illustrating this object before the Academy of Christian Archaeology, asserted among other things that the fact, that this wine came from Hellenic lands and from Christian property, would lead to the belief that the two saints owned landed property in the East:⁶⁷ this is a further argument in favor of their establishment in the East.

However this may be, it is certain that, after Julian became emperor, Paul and John retired to private life in their house on the Coelian. It is not known how they came to own it, or when they first began to live there. To judge from its position, so near to the Palace of the Caesars, it is to be conjectured that their position at the imperial court obliged them to choose a dwelling in this vicinity, and that this happened while the court was still in Rome. Nor is it

⁶⁴ Ap. MABILLON, *Analecta*, t. 1, p. 402.

⁶⁵ Cf. MAZOCCHI, *Calend. Neapolit.*, t. III, p. 725, No. 499.

⁶⁶ DE ROSSI, *Roma Sott.*: *Il Cimitero di Genesio*, p. 659; *Bullettino*, 1869, p. 7.

⁶⁷ DE ROSSI, *Bullettino*, 1888; *Conferenze*, Feb. 1889.

improbable that this house belonged to the Palace, as did all this part of the Coelian in the time of Nero and his *Domus aurea*. Or, judging from the great size of the building, it may have been the private palace of the princess Constantia, to whose special service John and Paul were attached; and she may have left it by will to these faithful ministers as a reward for their services. The house itself, as I shall shortly demonstrate, was of ancient plan, modified and restored several times during the third and fourth centuries. The religious paintings with which it was decorated in about the middle of the fourth century show that already at that time it was inhabited by Christians, that is, by our martyrs. This is a proof all the more beautiful that it is so rare (not to say unique) to find a private Roman house adorned, like a church, with religious compositions.

It is not my intention to discuss in this place the intricate question, so much disputed, of the Constantia named in the *Acts* of SS. John and Paul, in order to decide who this princess was. I will only say, with Comm. De Rossi,⁶⁸ that she is not the Constantina of the basilica of Sant' Agnese on the Via Nomentana, nor is she one of the daughters of the emperor Constantine, but is one of his descendants, probably a niece on the side of Hannibalianus or Gallus, the successive husbands of his daughter Constantina. In support of the truthfulness of the above-mentioned *Acts* that speak of Constantia, a fact should here be adduced from one of the paintings in the house on the Coelian. It is a fresco, of the close of the fourth century, which represents a composition with six figures. Of these the principal are two young men standing on either side of a noble damsel, richly robed and of noble presence: De Rossi recognizes in them John and Paul and the princess Constantia: *cum quibus Augusto radiat Constantia serto*,⁶⁹ as sang Wandalbert, a writer of the ninth century.⁷⁰

Neither is it my intention to enter into an examination of our present text of the *Acts* of SS. John and Paul, either for the purpose of extracting historic information or for deciding on their value from the critical standpoint. They include, however, a side that must be touched upon, as it is connected with what forms the greatest inter-

⁶⁸ De Rossi, *Momiesi: Il Mausoleo di S. Costanza*.

⁶⁹ *Martyrolog. ad diem 26 Jun.*

⁷⁰ De Rossi, though previously prejudiced against the authenticity of the *Acts* in so far as they refer to Constantia, as soon as he saw this painting was converted to the above interpretation.

est of these discoveries on the Coelian. We have found in the house of John and Paul not only an archæologic monument of the first order but a luminous proof of the truth of Christian traditions and historic reminiscences. According to Tillemont and his followers, these *Acts* are a tissue of fables, a contemptible legend of Byzantine times. Such criticism is now shown to be false. The monuments, discovered after more than fourteen centuries of oblivion, correspond perfectly and in every detail to the description in the document. Furthermore, surprising as it may seem, it was possible, by following the indications of this document, to conduct the excavations by *a priori* knowledge, in search (1) of the *ædes* on which we read that the *titulus Pammachii* was erected; (2) of the *cella* in which the confessors of Christ were surrounded at night by the soldiers of Terentianus and put to death; (3) of the ditch in which their bodies were carefully hidden by their butchers; (4) of the *confessio* made on the site by Byzantium; finally, of the tomb and the traces of the three contemporary martyrs, Crispus, Crispinianus, and Benedicta. With this document as a guide, I succeeded in finding, one by one, all these precious remains spoken of in it: a document held to be worthy of little faith if not totally spurious. And so the discovery of the house on the Coelian may truly be called a triumph of historic truth and of the traditions of the Roman Church.

It would be out of place in this article to attempt to show minutely the correspondences between the *Acts* and the monuments discovered. Thus, in the *Acts*, it is said, that secrecy having been enjoined regarding the place where the bodies of John and Paul had been placed, Crispus, Crispinianus, and Benedicta sought for them diligently and in anguish of spirit, and when they had found them *intra parietes ædium*, they would come to venerate them and pray at the tomb. Now, in the monument itself, there are three paintings, dating from the close of the fourth century, placed next to one another on three separate walls, which reproduce this story with singular naturalness. In the *Acts* it is added that the satellites of Julian, having heard of the fact, ordered the capture of the three bold Christians who were caught *in flagrante* on the spot, and were condemned to pay the penalty with their heads. In the monuments, by the side of the three above-mentioned frescoes, are two others, painted at the same time, which represent to the life this arrest and this martyrdom in its most minute details. One of these details is, that the bodies of the martyrs are ignominiously cast to the dogs. This also is represented by the

Christian painter a century before the *Acts* were written. This passing mention is sufficient for the present purpose, and a minute description of the paintings will be given in its place when the *confessio in aedibus*, to which they belong, is spoken of.

A few words may now be said of the way in which the discovery of the house of SS. John and Paul took place. It was not made by chance, as is usually the case. It was my intention to write some historico-archæological memoirs on the martyrs of the Coelian and their basilica. A study of the subject at once showed me that the saints inhabited this declivity of the hill, and that the basilica rose over their house. At first, it was my opinion that little or nothing could have remained of the building, as is unfortunately the case with all the other *memoriæ* known to have been erected in *aedibus sanctorum*. I wished, however, to be certain of the facts, and, having noticed that the level of the street was in great part lower than that of the interior of the basilica, I began to hope that in this difference I might find some remains of the house. In March 1877, I let myself down into one of the tombs made below the pavement of the basilica near the high altar, dug around in the earth and bones, and found traces of paintings that had all the characteristics of the art of the fourth century. Being encouraged by Comm. De Rossi, to whom I communicated my discovery, I proceeded to transport the bones to another spot in the church, and cleared the tomb of earth, demolishing all the modern additions made to convert it to such use. After a month's labor, I had opened up an entire chamber, covered on three walls with frescoes of the period mentioned. From this chamber I passed, by a passage which I discovered, into another, then into a third and so on. All the rooms that are placed on the main axis of the *domus* were filled with well-trodden earth up to the top and on their crushed vaults rested the mosaic-pavement of the basilica. This made it a matter of great difficulty to empty them without injuring the church above. But this was finally accomplished, and now more than one-half of the *ædes* which was enclosed within the perimeter of the basilica is unearthed and accessible. This part of the monument is what will be described in this and successive papers. The excavations are still continuing, and new discoveries are being made, but the main and historic part of the building is already opened up, and future additions cannot change the archæological data which will here be given.

IV. PLAN OF THE HOUSE.

Two main classes of houses were distinguished by the Romans: the *domus privata*, that served as a dwelling for the owner or for a family; and the *insula*, which was either several houses joined together or several apartments suited to the use of several tenants. The noble and well-to-do classes usually lived in a private house or palace, while the common people, on the other hand, used to a life entirely in the open air, rented some rooms in an *insula* and were satisfied with very modest accommodations. The Coelian house inhabited by SS. John and Paul, who were illustrious and wealthy, was a *domus* owned by them, though from its size and from being surrounded on all sides by streets it looked like an *insula*.

Although differing in dimensions, in the number and arrangement of the rooms, according to the wealth of the owner or the conditions of the ground, Roman houses were usually modelled on a similar plan determined by architectural prescriptions and special laws then in vogue. The *præthorium* or entrance-hall led from the street to a large rectangular *atrium*, covered only along its sides by a roof supported by columns or piers: this was the *compluvium*, in whose centre was a marble basin, the *impluvium*, to receive rain-water. To the right and left of the portico were arranged a number of *cubicula* or rooms for various domestic uses. At the end was the *tablinum*, the principal room in every Roman house, which served as a reception-hall. It was open at both ends, so that it was possible, from the street, to see through the whole house from one end to the other, across the *tablinum*. Behind this hall was a second *atrium*, always present in houses in the least comfortable (even when the first was wanting), called the *peristylum*, from the colonnade that encircled it. This constituted the internal portion of the house. Along its covered sides were arranged the chambers in which the family lived: the bed-chambers, *cubicula nocturna et diurna*; the *triclinium* or dining-room; the *pinacotheca* or picture-gallery; the *conclavi* or halls reserved for the especial use of the owner, etc. Fountains and gardens usually adorned the peristyle, which was considered the pleasantest part of the house. Such a model is followed in nearly all the houses of Pompeii. It is followed in the house on the Coelian, although its plan was several times modified during more than a century, and especially during the time of the martyrs. The Romans had this peculiarity, that,

unless it were impossible to do otherwise, they never demolished the old when they built the new, but left it and sought to unite the two. It is astonishing to see so often, in Rome as in the province, several kinds of construction in the same building, the different periods of which are evident. Three such periods are manifest in our Coelian house: that of the end of the second century; one of the third and fourth centuries; and one even of the fifth and sixth, after the house had been changed into a basilica. These modifications affected the original plan considerably, which also remains, in part, uncertain, owing to the incompleteness of the excavations.

The main entrance, on the outside, the *ostium*, *prothyrum*, and *complicium* with the annexed buildings, are where at present stands the lower field of the Passionist *ritiro*, in the space between the municipal *palestra* and the new chapel of San Paolo della Croce. I have already said that two streets passed at this point, one along the west side of the *Claudium* toward the Flavian amphitheatre, the other, from the *Claudium* to the Palatine, along the line of the Severian aqueduct. The entrance of the house opens on the latter street. I have not uncovered but have merely investigated this front half of the building, the whole of which is outside the perimeter of the basilica. Only a few vestiges of it remain, disturbed by the work undertaken here during the last fifty years. Some beautiful polychromatic mosaics were found here, some of which were destroyed, others were again covered over. More than one-half of the peristyle, also, is lost, that part outside the basilica. The columns of both *atria* are probably the same that were used in the construction of the basilica, and still stand where Pammachius placed them. They are of black granite, a little over four metres in height, with a diameter of 50 centimetres. For a large basilica with three naves, at least twenty metres high, columns of such small dimensions must have appeared out of all proportion, as they certainly are; but the pious founder, in erecting the church within the dwelling of the martyrs, may have preferred to pass over architectural proportions in order to put to such use the columns that were associated with the place. A similar use was made of all the other decorative marbles of the house.

The remaining part of the peristyle is to be found within the area limited by the altar of S. Saturninus and that of S. Pammachius, under the left nave of the church. Investigations on this spot have made

this certain, but the site is still filled with rubbish. Consequently, of the entire house only the inner chambers have been preserved in good condition, those which are situated behind the peristyle. Fortunately, this was, so to speak, the heart of the house, the part in which the owners dwelt. This is clear from the arrangement of the rooms mentioned above as on the axis of the building, and from their rich decoration of mosaics and frescoes; whereas all the others of which there is any trace are not only without decoration but are of an inferior quality. The same may be said of the other adjacent rooms on the same floor, which will be described in another place.

That part of the house which I term the *parte nobile*, and which is in the rear of the peristyle, consists of five parallel rows of two chambers. In the third and central row is the *tablinum*, about six metres long by five in width. A large arched opening leads from it into the internal *atrium*, and another similar archway on the opposite side opens into a second smaller chamber or passageway. From this second room, which was open on the side facing the street, the *tablinum* received light and air. Two doors in the side-walls led into adjoining rooms. However the use of the *tablinum* may have varied, in successive periods, from its original purpose of containing the family archives, it was an indispensable part of every Roman house. In this case, instead of being placed in front of the *peristylum*, it is behind it, perhaps for topographic reasons.

Of the other rows of rooms one only has not yet been freed from earth. Thick partition-walls separate these rooms, which communicate by means of wide passages opened in the walls. Two of these rows have a simple archway instead of this division-wall. A glance at the plan on PLATE XVI will show the details of the entire arrangement.

The rhomboidal shape given to all these rooms of the *parte nobile* may appear strange, especially as the street itself is at right angles with the axis of the building, and therefore could not be the cause of this angular deviation. A careful examination of the PLAN will show that this deviation increases gradually from south to north. The first zone of the building near the *Clivus Scauri* is perfectly rectangular; the second is almost so on one side, while on the other it deviates slightly from the regular plan, from one end to the other; and, finally, the third bends so much at the *atrium* and in turning becomes so narrow as to violate all rules and proportions. The only explanation of this is, that,

before the house was reduced to its present condition, a second street passed along that side, obliging the builder to follow its line.⁷¹

The *cryptoporticus* or corridor that flanks the oblique side of the court is still paved with those polygons of lava which the Romans used for their public roads. This extends over a surface of two metres, which is the width of an ordinary street: beyond that point the pavement is of a different kind.

When the street was abandoned and the house was enlarged on that side, various modifications of the structure became necessary. There are still evident proofs of this fact. In the middle of the front wall of the old building, where is now the great opening which joins the *tablinum* to the court, there used to be a simple exit of small size. This was one of the outer doors of the house: the enlargement both in height and breadth dates from the fourth century. Besides this door there were no others that opened on to the street, from the *tablinum* onward at least; nor were there any in the opposite wall. It therefore became necessary, in order to establish communication between the first building and the new additions, to open two doorways, one in each wall. As these were found to be sufficiently strong, it was deemed not necessary to place over them architraves or arches, and this is enough to show them to belong to a date later than the building.

At about the same time, several other adjoining constructions were added to the house: of this there are still visible traces in the joinings which belong to the fourth century, whereas all the added parts belong to the third or even perhaps to the second century. It is easy to identify these additions, on the *PLAN*, as they all are built on an axis different from that of the house proper, just described; and, besides, their irregularity shows that they have nothing to do with the original plan of the house. The additions are distinguished on the *PLAN* by a lighter tint.

Back of the five rows of rooms that composed the *appartamento nobile* is a rectangular space four and a half metres wide and twenty-five metres long—the exact width of the façade of the house on that side. Within this enclosed space, which has been only partially excavated, six doors open onto the street often mentioned, the *Clivus Scauri*,

⁷¹ Pompeii offers, among a hundred others, an instance quite like this in the suburban villa of M. Arrius Diomedes. The so-called Street of Tombs, on which it is situated, runs obliquely to the axis of the building, which led to the adoption of the triangular form in which it is built: OVERBECK, *Pompeii*, 4th ed., p. 369.

each one of which corresponds to one row of rooms or to one of the passageways that lead to them. In the fourth century, division-walls were placed there at different points, in order to prevent passing through these doors. At first, however, this entire gallery was open, and looked like a long vestibule with doors that communicated with the inner rooms. Was this, then, the *prothyrum*, and therefore the place of the main entrance to the original house? If it were so, we should be obliged to regard it as of very small dimensions, as without peristyle or *atrium*, on account of the streets that circumscribed it. Any opinion would be but a mere conjecture. It can only be asserted, with safety, that at the time of SS. John and Paul the *domus coelimoniana* had no entrance on that side, and the six doors, interrupted by walls, served but to give light and air. I was hence led to seek for the main entrance to the house of the fourth century at the point where I found it, namely, beyond the *tablinum*, outside the perimeter of the basilica.

The house therefore received light from the street on the south side, and on the north received it from other doors and windows which opened onto the inner court. After the works of the fifth century, however, all these openings were closed or were covered by two walls which were then built within the house itself, along its two sides, in order to place upon them the twenty-four columns of the church. Thus was the ancient building left within the perimeter of the new, and was cut into three parts, following the line of the three naves of the basilica: not only the light but all communication between the sections was cut off. These walls are given on the PLAN.

V. SECTION AND STRUCTURE OF THE BUILDING.

The house had two stories, or three including the ground-floor. To the ancient habit of preserving the old in raising new constructions we owe the preservation of the façade of these three stories at the time of the construction, in the fifth century, of the basilica in *domo sanctorum*. This façade is still visible on the left side of the street of SS. Giovanni e Paolo, and comprises the entire south side of the church. To the ground-floor belong the six great arched doors symmetrically arranged in a row as a *peristernus* or inner portico. Above them are two rows of windows, indicating the lines of the two upper stories. When these stories were destroyed in order to make way for the basilica, their outer wall was retained to become that of the church. The windows of the first story were closed, and those of the second story

were used as the clerestory of the basilica. Their tops only were destroyed in order to lengthen them and adapt them to their new use.

This example of a three-storied façade of an ancient house may be said to be the only one known. In Herculaneum something of the kind is seen in a small one-storied building;⁷¹ and recently at Pompeii has been uncovered, on a hill-side, a house which appears to have had several stories; but such examples may be termed ruins or vestiges that have nothing comparable to the grandiose façade of our *domus coelimoniana*. There were, of course, both in Rome and in the provinces, many higher and more magnificent buildings. We know that special laws were passed to keep within bounds the mania to raise houses to a great height.⁷² Partly from the too-rapid increase of the population, partly through private vanity, this abuse had become quite general, and Petronius wrote of it, *ædificanti auro, sedesque ad sidera tollunt*;⁷³ and the rhetor Aristides could say, that all Italy could not hold the buildings of the immense city, if they were reduced to a single floor.⁷⁴ But all such buildings have been destroyed, and this one would certainly have suffered a like fate had it not been incorporated in the constructions of the basilica.

The height of the house from the street-level is about fifteen metres; six of which belong to the ground-floor and four to each of the upper stories. This height is in perfect architectural relation to the length of the building, which is about thirty metres. Without being at all rich in the display of marbles and decoration, the great façade on the *Clivus Scauri* is singularly fine in the arrangement of its parts and for its elegance, even since it was deprived of all ornament and reduced to the bare wall. In the drawing reproduced in PLATE XVII, I have confined myself to copying present facts, except in so far as I have left out certain arches built, during the Middle Ages, to support that side of the basilica, as well as some repairs executed from time to time. Neither is the façade continued in the drawing: it originally stretched eleven metres further along the same line up to the portico of the basilica, beyond the five rows of chambers which form the main section of the house. It is of different design and period. The windows in this part of the wall which, like the others, were closed in the

⁷¹ COMPARETTI & DE PETRA, *La Villa Ercolanese di Pausani*. The *Casa del balcone pensile* at Pompeii is an example of a two-storied building.

⁷² CICERO, *De lege agraria*, II. 35.

⁷³ PETRONIUS ARB., *Satyricon*.

⁷⁴ JUVENALIS, *Sat.* XIV; TACITUS, *Ann.*, VIII. 3.

fifth century, are of a single story and do not correspond in either form or level with the preceding; and, besides, there is no exit of any sort on the ground-floor. It is easy to see that this outer wall belongs to the building which I mentioned above as having been added to the primitive building during the fourth century. That it is so, is shown by the plan on PLATE XVI.

The illustration of this façade will render a more minute description unnecessary. One further remark it is interesting to make: all the windows that remain intact, as are those on the first floor, had a wooden architrave under the brick arch or rather archivolt, and this wood still remains in place, in good preservation. This is not so remarkable, considering the great care taken by the ancients in their choice of wood for construction, and in their selection of the season for cutting it.⁷⁵ Flaminio Vacca relates, in the time of Pius V., that, in demolishing some walls of the Republican period⁷⁶ in the forum of Nerva at the so-called *Arco dei Pantani*, there were found dovetailed wooden cross-bars used to bind together the large stone blocks.⁷⁷ In the Neronian port at Anzio, the beams of the foundations of the moles still remain, of extremely hard oak,⁷⁸ and just as well preserved was the wood extracted from the lake of Nemi known under the name of *nave di Tiberio*, which also belonged to foundations.⁷⁹ On the west side of our house on the Coelian, there remains of the façade all that part which serves as the end-wall of the basilica on either side of the apse, above the botanical garden. In the next chapter, I shall describe this side. The other two fronts have been either demolished or hidden by the ancient and modern constructions of the church.

Several staircases joined together the different apartments of the building. The main staircase was placed in the inner court at the entrance to the *tablinum*, on the left. There remains only a portion of it, consisting of fifteen steps, reaching as far as the level on which was built, at the close of the fourth century, the *confessio* of the eponymous martyrs. The traces of other steps on the two side-walls show that they continued in the same direction for some distance, in fact, as far as the story above, which was placed at least a metre above the level of the present pavement of the church; so that there must have been at least twenty steps. They were made of stone from the

⁷⁵ VITRUVIUS, II. 9. 16.

⁷⁶ NIBBY, *Roma nel 1838*, I, p. 235.

⁷⁷ PACCA, *Memorie*, § 89.

⁷⁸ NIBBY, *loc. cit.*

⁷⁹ NIBBY, *ibid.*, p. 236.

Tivoli quarries (*pietra tiburtina*), and rested on a tunnel-vault constructed between two walls, with an almost uniform width of 1.70 met. Of these I have found only some vestiges, according to which I have sought to readjust the stairway in order to make it passable. Before the house was abandoned and filled with earth, pilgrims used it in coming to the *martyrium* of the saints John and Paul.

Another small stairway, under the preceding one, led from the ground-floor to the rooms added at a later date, near the peristyle. These being on a lower level, it was necessary to place some steps at the opening made at the point of communication. A third staircase, not more than a metre wide, led to another lower story yet to be described, and still another led by a different way to the upper stories. The two latter stories, not having yet even been excavated, are not represented on the PLAN.

A few words are now in order regarding the construction of the building and its different parts. As in the great part of constructions of the imperial period,⁸⁰ nothing but bricks are employed, sometimes red, sometimes yellow. The facing of the walls is good, and varied according to the various periods of construction and the requirements of the site. Nearly everywhere triangular bricks are used, with which are mingled, after a certain number of courses, the usual courses of square bricks commonly called *goloni*, which served to unite more firmly the facing with the inner mass of the wall.⁸¹ In the earlier walls of the second and third centuries, the facing is interrupted at regular intervals by rectangles of reticulated work made of small pieces of tufa cut in cubes and fitted together like wedges, giving a design resembling a network.⁸² This method of construction is known to have been introduced into Italy during the last times of the Republic, and to have ended with the early Empire. But, although these walls of the second and third centuries are of fine material and precise workmanship, almost all those of the fourth are of the worst kind of construction. In both, however, there is this peculiarity, contrary to general custom, that the facing begins, not at the pavement of the rooms but at the lowest foundations. The same artistic difference is noticeable in the arches: among those of a good period there are several of such fine construction as to equal the finest Neronian brick-

⁸⁰ NIBBY, *loc. cit.*

⁸¹ NIBBY, *loc. cit.*

⁸² VITRUVIUS, II. 8; PLINIUS, *Hist. Nat.*, XXXVI. 51.

work, while others, of later date, are astonishingly irregular and carelessly built.

The inner and outer doorways are of varying shapes and sizes. Some were topped with a round arch, others, I infer, with a low arch erected over a marble architrave. This inference is based on the sockets I have found in all of them, with evident marks of the chisel used to extract the marble when the house was abandoned. The thresholds also were of marble, as may be seen from a few that still remain in place. The form of the ceilings varies according to the different shape of the rooms: some are *a vela*, others have cross-vaults or barrel-vaults, the latter form being used in nearly all the halls that varied much from a square plan. With a few exceptions, all were covered with stucco, without any cornices or other decoration in relief or *incavo*; this flat surface being covered in the finest rooms with a frescoed decoration. The height of their imposts was in proper proportion to the size of the walls. Their height in the centre is, in all the rooms of the *parte nobile*, five and a half metres: in the rooms of lesser importance, there is a medium height of three metres.

In one place only have I found any indication of the flat ceiling, which is, nevertheless, of such frequent use in Roman architecture under the names of *coelum* (Vitruvius, vii. 3. 3) or *lacunar* (Cicero, *Tusc.*, v. 21.; Vitruvius, vii. 2. 2). I am not able to say how the building was covered, as no part of the roof remains. The common custom, we know, was to cover the most costly buildings with marble tiles and slabs, while the inferior houses had brick tiles, *tegulae* and *imbrices*.⁶³ In the heap in which were buried all the remains of the destroyed parts of the house, have been found a great quantity of marble fragments belonging to the first kind of roofing and none belonging to the second, though terracotta fragments of other descriptions have come to light in considerable quantity. This would lead to the belief, that the roof was certainly of marble. The Romans sometimes used terraces instead of roofs, as is now often done in Italy, in order to secure places for taking the air without leaving the house.⁶⁴ In our house, I have found traces of this custom, also, over a chamber which is now in great part destroyed, to which I shall refer later.

As already noticed, the use of marble decoration in private houses was introduced on the Coelian by Mamurra, who was the first to carry

⁶³ PLAUTUS, *Mil.*, ii. vi. 2; TERENTIUS, *Eun.*, iii. v. 40.

⁶⁴ SERTONIUS, *Nero*, xvi; PLAUTUS, *op. cit.*, ii. iv. 25.

out this form of adornment in his own house. It was therefore to be expected that, in the noble house of SS. John and Paul, this custom should be followed. Traces of marble incrustations, friezes, and ornaments of all descriptions have been found here in great quantities, giving us a high opinion of the beauty of the interior decoration of the rooms. Unfortunately, these are but minute fragments of what was destroyed by ruthless hands. Slabs of all kinds, cornices, bas-reliefs, friezes, bands, squares, colonnettes, capitals, bases, *etc.*, all worked in the finest style, have been collected in great number on all the points where excavations were carried on—*carystium*, granite, alabaster, black and verd antique, *coralaticus*, *fugitivus*, porphyry, and a great variety of other kinds of rare marbles, known and used in Rome and mentioned by Vitruvius and Pliny, were used in tinting the rooms with their varied colors.

The majority and the best of the flat marbles were placed in the pavements. Among the Romans, the commoner floors were covered with broad slabs of well-polished terracotta or with bricks bound together with fine mortar and arranged like a fish-bone; it was called *opus spicatum* from its resemblance to an ear of corn. A second kind consisted of a simple layer of pebbles (*astraco*) and potsherds well pounded, called *opus signinum*. All three of these ordinary kinds were used in the house in certain crypts and cells for domestic purposes. In the next place came the slabs of marble, almost square in shape and of a single color, used in the simplest form of luxurious pavements. More than one hall in this house was paved in this fashion, as is shown by the regular imprints on the *astraco* left after the removal of the marbles. Elsewhere, use was made of a mosaic of pure white without decoration, called by Vitruvius *opus tessellatum*, from its rectangular cubes. The work of this description in our Coelian house is extremely careless and irregular in the arrangement of the cubes, showing it to have been executed in the fourth century. The porticoes around the peristyle, which have been only partially explored, were paved in this manner.

There were also in the building far richer pavements. Such were those of fine mosaic of geometric design in white and black, or in yellow, red and green, cubes; the *opus sectile* made of larger pieces of marble of various colors, cut in varied shapes. Serpentine, *palombino*, porphyry, white and yellow marbles, are the dominant kinds used in this house, as at Pompeii and elsewhere. The extraordinary number of

dispersed *crustae* or of more or less fragmentary groups of them, which have been found in the excavations, shows that there were many rooms paved in this fashion. Of the *opus vermiculatum*, or *musivum* properly so called, which depicted figured compositions, I have found no certain traces. I say that there has been no certain indication of such work, for, of the many pieces of this *opus* picked up among the ruins, and forming parts of figures on a ground of gold or of blue *lapis lazuli*, I am not able to decide whether they belong to the house of the third and fourth centuries or to the basilica of the fifth century.

This is sufficient to show that, in this respect also, the *Domus coeli-montana* was not inferior to the richest Roman houses of the day.

PADRE GERMANO DI S. STANISLAO, PASSIONISTA.

Convent of SS. Giovanni e Paolo, Roma.

[TO BE CONTINUED.]

NOTES ON ORIENTAL ANTIQUITIES.

[PLATE XVIII.]

IX. A BABYLONIAN CYLINDRICAL BASRELIEF FROM URUMIA IN PERSIA.

This basrelief, now in the possession of the Metropolitan Museum of New York, was found in the mound of Geog-tepe, near the city and lake of Urumia, both of which were well known to the Assyrian kings, and were the scene of their campaigns. For a description of the mound and chamber in which the basrelief was found, I am indebted to Mr. E. C. Shedd, son of the Rev. J. H. Shedd, D. D., missionary among the Nestorians of Persia. Mr. Shedd was a teacher at Urumia at the time of the discovery of the cylinder, and visited the chamber in which it was found. I give his account.

"Over the entire plain of Urumia are scattered ash-hills of various sizes, to the number, at least, of twenty-five or thirty, and others are found on the plain of Sulduz, south of Urumia, but none to the north, in Salmas. These hills are, in some cases, composed entirely of ashes; in others the ashes have been added to a small natural eminence. In fact, there is scarcely an eminence on the plain that has not been increased, usually to a very large extent, by this means.

"Since the beginning of this century, the inhabitants have used these ashes to fertilize their fields, and a very large amount of broken pottery, and some brick and stone walls, have been continually uncovered, the stone being removed and sold. So far as we know, no cut stone has been found.

"The two largest hills are those of Degala and Geog-tepe. Degala Hill is composed entirely of ashes: it is about 100 feet high and 1000 feet long. At a point near the bottom of this hill a foundation-wall of burnt brick was discovered; the bricks measuring at least six inches thick by eighteen to twenty-four inches long.

"Unbroken earthenware dishes are also frequently discovered. The variety of style in the earthenware is not great. The most common forms are a round pot, with a small handle and large spout, and a round stand, open at both ends, and usually with long rectangular

openings in the sides, like large slits. A few specimens have some ornamentation; in one case, men on horseback are represented in an exceedingly crude manner, the horses led by footmen. The discoveries being made by ignorant workmen, it was impossible to learn at what depth the various specimens were found.

"Graves, also, have come to light. In a grave found at a depth of about fifteen feet, half-way down the hill, was a skeleton near whose shoulders stood two jars, exactly alike. A roughly executed ornamentation, consisting chiefly of a number of goats or rams, all intended to be exactly alike, extended around the centre of each jar. We have heard that skeletons have been found buried in large earthen jars, such as are yet used in Persia for storage.

"But, interesting as Degala Hill is, Geog-tepe Hill is, in some respects, yet more so. Copper rings and bracelets have here been found arranged around the skeletons in the graves.

"I may here remark that all these remains show signs of considerable antiquity. The surfaces of the burnt bricks crumbled very readily, and, of the skeletons, usually not more than a few pieces of bone remain. In the spring of 1888 the inhabitants of Geog-tepe commenced building a new church on the hill. Needing water for building purposes, they started a well. After digging down some distance they struck the room in which the cylinder was found. The floor of this room is on the surface of the earth proper, under a deposit of ashes nearly 27 feet deep. Its dimensions were as follows: length, 19 ft. 3 ins.; width at floor, 7 ft. 3 ins.; width at ceiling, 4 ft. 3 ins.; height, 7 ft. 2 ins. The walls were very rudely built of uncut sandstone, quarried into rough oblong blocks. This sandstone is the common building-stone of the country, and there is a quarry of it, about three-quarters of a mile distant, from which these blocks might have come. The blocks were about 1 ft. high, and $2\frac{1}{2}$ – $3\frac{1}{2}$ ft. long. There was no noticeable mark of any cutting-instrument on the blocks. The floor was paved with common sandstone flags. Some small fragments of bones were found under this, but so exceedingly rotten that it was impossible to make anything out of them.

"The vault was formed in the following manner: about four ft. above the floor, a course of stones projected slightly beyond that on which it rested, and from that point upward every succeeding course had a similar projection until the room at the ceiling was three feet narrower than at the floor. The remaining space was covered by huge

flat stones, one of which measured nine ft. in length. There was no doorway, but on one side, in about the centre of the room, was a hole in the wall, about one foot square, that extended a considerable distance. No mortar was used in the construction, and no attempt was made to smooth the projecting corners of the stones or to make them fit closely together."

Mr. Shedd informs me that quite a number of the earthenware vessels found in these mounds have been collected in the museum of the Missionary College at Urumia.¹ I cannot believe that the mounds are, as Mr. Shedd fancies, composed wholly of ashes: they are rather of clay which has become mixed with ashes and saturated with the nitrous salts of organic decomposition. One of the oldest known works of Babylonian sculpture gives us the design of a burial-mound in the process of making, the men carrying up baskets of earth and emptying them over the corpses of the slain.²

It will be observed that the chamber in which the cylinder was found was constructed on archaic principles of architecture, reminding one of certain prehistoric Greek and Italic chambers, and especially of some Etruscan tombs, for example, those of the archaic necropolis of Orvieto which date from the VII cent. B. C. The corbelled vault was formed by courses of stones projecting one over another. In this case, the inner face of the vault was not cut so as to form a continuous line, but the stone courses were left in the form of inverted steps. The space between these converging courses at the top measures four feet, and is covered by flat slabs, a peculiarity which places this chamber in a category totally different from the early domical Greek *tholoi*, and one which seems to belong to a more primitive stage of architectural development. This appears not to have been the usual method of making the Assyrian vaults, but was found by Taylor in the older Babylonian constructions of Mugheir (Ur), in brick, of course. If we may draw any conclusion from the construction of this chamber on the ground-level of the hill of Geog-tepe, we should be carried back to a period indefinitely earlier than 800 B. C.

The cylinder (PLATE XVIII-1) is of translucent alabaster, the surface being rendered somewhat opaque by exposure. It is 94 milli-

¹ I may add that in the library of the college is a considerable collection of Syrian manuscripts, gathered from old monasteries and churches, and that skilful copyists furnish, at a cheap rate, copies for European or American scholars.

² This is a relief found at Tel-loh: DE SARZEC, *Découvertes*, pl. III, c; PERROT et CHIFFEZ, *Chaldée et Assyrie*, fig. 383.

meters long, and 59 mm. in diameter; the walls are about 6 mm. thick. The lower edge is ornamented with the lines of alternating rectangles used to designate hills: the upper edge is ornamented with a line of rectangles, of which the alternate ones are deeply cut. The designs appear to be archaic Babylonian. Two doors swing outward on their posts, and are held by bearded porters, who wear only a low, two-horned cap and a short fringed garment or skin, hanging from a girdle at the waist. Between the two gates is the sun-god, Shamash, in his ordinary conventional form. He has the low, two-horned cap, and wears a long garment hanging down behind, and open in front to expose his advanced left leg. This foot is lifted on a low hill, but the leg is not properly drawn, so as to show the bent knee, but is made shorter than the other. In his right hand he carries a club with a knob near the top, resting on his shoulder; in his left hand, which is partly extended forward, he holds a weapon which has a blade, but which is not notched as this weapon generally is on the cylinders. Behind the left-hand porter stands Ea-bani between two upright standards: his face is in front view, as usual, but he steps toward the god. The front standard he holds in his two hands: it has, at the top, a conical object over three ring-like protuberances. The standard behind Ea-bani has, at the top, an ornament like a monkey seated with its bent knees close up to its body, and several waving lines rising from the top of its head. Ea-bani has a twisted curl on each side of his head, and his tail is carefully curled. The phallic organ is pronounced, as on the cylinders, but is differently drawn. Behind the right-hand porter three figures in procession approach the god. The first figure may be a man: his headdress has been lost; one hand is raised, and the other, laid across his waist, comes out from under his garment, which hangs unbelted over his shoulders, and reaches to the knee of the front leg and nearly to the ankle behind. The next figure is the common representation of what I regard to be the goddess Aa, wife of Shamash, with a long flounced garment and both hands lifted before her; she has the same low, two-horned cap that is worn by all, unless it be the figure last described, whose headdress has been lost; she has five rings about her neck, bracelets (as had the previous figure), and her usual long pigtail which curls over at the end. Behind her is a bearded divine figure, with the right arm bare, and a long garment which reaches to the feet, hanging from the other shoulder and covering all the left arm except the hand: his hands are

clasped across his waist, somewhat as in the Tel-loh sculptures, except that the fingers of the outer hand fall over, instead of rising from under, the other hand. All the figures are barefooted; they have large noses and prominent eyes; and they wear their hair turned up in a large roll behind, except the two porters, whose hair hangs down behind over their shoulders. The relief of the figures is as much as 2 or 2½ millimeters. The lower edge is square and rather thick, as if the cylinder was meant to stand on it, while the upper part is reduced to a thin edge. The right-hand gate has been partly corroded away by water, as also a portion of the male head near it. Two small pieces near the top were broken off long ago, but what is missing is of no special importance. The inner surface shows the tool-marks, which run longitudinally, proving that it was not turned out on a wheel. The entire surface without and within was coated with black paint, or bitumen, of which considerable patches remain: it must have considerably marred the finish of the work, which was quite good.

This object has a very special value in the study of Babylonian mythology. In this JOURNAL (vol. III, pp. 50-56), I published a paper on *The Rising Sun on Babylonian Cylinders*, in which I showed that the scenes in which George Smith thought he saw the building of the tower of Babel are really representations of the sun-god coming out of the gates of the morning, and either stepping up over a mountain or lifting himself by his two hands placed on mountains on each side of him. I then quoted from Babylonian hymns to show that this scene is abundantly described. I also expressed the opinion, which it was impossible to prove, that we have a conventional later form of the sun-god on these common hematite cylinders of a little later period which give us a bearded deity in a long robe, with one bare leg extended and the foot resting on a stool, and generally carrying a weapon like a notched sword. We here have full proof that this conjecture was correct. Here we find this common form of the god with the foot raised, and connected for the first time with the two gates and the porters. There can be no question of the identification; and I am the more convinced that the flounced goddess who here, as so often on the seal-cylinders, accompanies him is his wife Aa, though I admit that the various goddesses were not much differentiated in art, and that this same form was probably employed to represent Sala, the wife of Ramman, and perhaps the wives of other gods.

There are no sure means of settling the age of this cylindrical object; but the archæologic indications, in my mind, point to a very

early date. Hitherto, the gates with the sun-god have been found only in the archaic Babylonian period; but here we have what appears to be a transition from this to the later form which is found on the cylinders which date, according to Pinches (*The Babylonian and Assyrian Cylinder Seals*, pp. 7, 8) from 1500 to 2500 B. C. There is nothing in the art of the relief under discussion which would forbid us dating it from this early period of about 2000 to 2500 B. C.; indeed, the peculiar style of *chevelure*, or, rather the two styles—one that of the porters, in which the hair hangs down the neck, and the other, that in which it is arranged in a large fold or knot, behind—are, I think, characteristic of a period which approaches the archaic. I confess that I am inclined to make this object, on archæologic grounds, as old as two thousand or more years B. C. I regard it as a purely Babylonian product, which was conveyed, probably in some conquest of a very early period, to this distant land of the Minni.

X. TIAMAT AND OTHER EVIL SPIRITS, AS FIGURED ON ORIENTAL SEALS.

The conflict between Bel-Merodach and the dragon Tiamat is very frequently figured on the Assyrian seals, but not, so far as present knowledge goes, on the Babylonian seals. The typical Assyrian form is that which appears in Smith's *Chaldean Genesis*, p. 114, which represents the god armed with his scimitar and pursuing, at full speed, the composite monster, who, when escape is impossible, rises upright on her hind feet, apparently halting and turning about to resist the attack. Tiamat appears, as in the larger and more elaborate representations on the palace-wall of Nimrûd, in her conventional form, with the head, front legs and feet of a lion, short square wings, the body covered with feathers, a short fan-shaped tail, and the hind legs and claws of a bird of prey. This type of griffin, or rather chimera, is very marked and characteristic. On one cylinder, however, belonging to Mr. F. W. Williams of New Haven, the dragon becomes a real serpent (PL. XVIII-2). In the later cylinders of Assyria, or still later in the time of the second Babylonian Empire, or the Persian Empire, we find that Tiamat is replaced by various human-headed sphinx-like figures, or even by birds. Indeed, there are so many transitional forms, before we come to the characteristic Persian representation of the divine hero fighting a lion, that it seems as if there resulted a confusion between the idea of Bel-Merodach fighting the dragon, and the conflict of Gisdubar and Ea-bani with the lion and the buffalo.

There is, in some of these representations, a feature that needs a consideration which it has not received; that is, the smaller griffin, or chimera, which appears between the legs of Merodach, also swiftly pursuing Tiamat. It appears in its most perfect form on an Assyrian serpentine cylinder belonging to me, which is the finest representation of this scene, in its original form, that is known to me (PL. XVIII-3). Another extremely fine specimen, belonging to Mr. R. S. Williams (of Utica, N. Y.), figured in this JOURNAL (II, PLATE V-8), is cut in chalcedony, but, being wrought in part with the wheel, is less defined in some of the outlines. Other good specimens are found in Lajard, *Culte de Mithra*, XXXIII-4, XXXVII-4. It is evident that this smaller dragon is one of the allies of Merodach, not of Tiamat. It is evidently running at full speed, with the legs thrown forward and the back at full length, the mouth open and the tongue thrust out, as in the case of the larger dragon. It is not lying prostrate, as appears by comparison of this and the Williams cylinder. It is to be explained from the story of the conflict between Merodach and Tiamat found in the fourth tablet of the creation-series. After the description of the arming of Merodach, which I will quote later, we read:

"He created the evil wind, the hostile wind, the storm, the tempest, the four winds, the seven winds, the whirlwind, the unending wind; he caused the winds he had created to issue forth, seven in all, confounding the dragon Tiamat, as they swept after him."

Later, when the conflict was joined, we read:

"The evil wind that seizeth from behind he sent before him; Tiamat opened her mouth to swallow it; he made the evil wind to enter so that she could not close her lips. The violence of the wind tortured her stomach, and her heart was prostrated and her mouth was twisted."²

Here we have a troop of evil winds created to accompany Merodach and aid in his attack. In the story of the attack, the wind becomes singular: "He made the evil wind to enter." In reducing the story to a design for a cylinder, all the evil winds could no more be pictured than all the weapons with which the god armed himself. Only one weapon is usually given, the straight-handled scimitar, or sickle, the "weapon unrivalled" of the poem. We may, with considerable confidence, conjecture that the horrible composite monster who accompanies Merodach is this "evil wind" similar in race to the evil Tiamat, and represented in the same fashion. A well-known winged statnette

² SAYCE, *Hibbert Lectures*, pp. 381, 382.

representing the evil southwest wind (Perrot et Chipiez, II, p. 496) mingles human with animal and bird characteristics, and belongs to another type. A similar form for an evil spirit is used also for the death-demon on the back of the bronze funeral-tablet described by Clermont-Ganneau (Perrot et Chipiez, II, pp. 363-4).

I have remarked that the representation of the fight between Merodach and Tiamat does not emerge in art until the Assyrian period, and I have been sometimes inclined to believe that the myth, as told in the fourth creation-tablet, was of a comparatively late origin. Nevertheless, it is to be remembered that the dragon is not unknown to Babylonian art: perhaps a dozen or more cylinders are known in which it appears, in an upright position, and in no special relation to other figures on the cylinder, unless its open mouth sometimes seems to threaten a human figure before it, or, as in one or two cases, it is in an attitude of conflict with another figure.⁴ The dragon-form is perfectly distinct and marked: the lion-head, the wings, and the feathered hind-legs, and eagle-claws. There can be no mistake about its being the same form of dragon as Tiamat in the representation of her conflict with Merodach. Nevertheless, as we have already seen that the evil wind may be represented under the same griffin-form, the evidence, that it is really Tiamat, is less complete than we might desire. We can only say that these cylinders make it probable that Tiamat is a factor in the Babylonian as well as in the later Assyrian art.

But we now come to another cylinder (PL. XVIII-4), an impression of which has lately come into my possession, and which is the immediate occasion of this paper. It is a large cylinder of shell, 33 millimeters in length and about 20 mm. in diameter. On it is a very spirited design, so far as I know, quite unique in Babylonian or Assyrian art. It represents a god, standing in a four-wheeled chariot and holding the reins in his left hand, while the body is bent backward and the raised right hand holds, in the air, a whip with which he is about to strike. He is clad in a long, flowing garment, which plainly covers his body from the waist down, but it is not clear that he wears any garment on his arms or the upper part of his body. His beard falls on his breast, and he wears the low, two-horned cap, or turban, worn generally by the gods. The pole of the chariot rises

⁴ A characteristic example is given in MÉNANT, *Recherches sur la Glyptique orientale*, fig. 96; see also my article, "Human Sacrifices" on *Babylonian Cylinders*, *JOURNAL*, vol. V, p. 35, fig. 8.

almost vertically from the axletree, and then gently descends till it reaches the neck of the creature drawing it. On the left of the pole is a chimera or dragon, the possible mate to it on the right not being drawn. It is similar to the regular conventional form of Tiamat, familiar in Assyrian art, and very much better drawn, with more life and feeling, than the Babylonian forms of the dragon on the hematite cylinders. It is walking forward, an attitude not appearing elsewhere. It has the head, body, front legs and feet of a lion; two wings, short and square, arising from its shoulders; a short, fan-shaped tail, feathered hind-legs, and the feet of a bird of prey, with the claws reaching forward and back. The head, somewhat depressed, with the mouth wide open, and with what looks like a long forked tongue or a double stream reaching from the mouth to the ground, gives the monster an attitude of unwilling subjection. We have here another remarkable example, showing how much better the artists drew the animal than the human figure. Between the wings of the dragon rises a female figure, who might be standing on the front part of the pole of the chariot or on the animal's neck. She is nude, with the body in side view, except the breast. On her head is the low, two-horned cap, and her long hair falls behind her shoulders as far as her elbow. Her two hands are raised, and each holds by the middle an object consisting of three waving lines, doubtless meant to represent the forces of nature—lightning and storm. Directly in front of these divine figures which I have described, and facing them, is a human worshipper, pouring out a libation by an altar. His head is bare; he wears a simple robe reaching to his ankles, holds his right hand across his waist, while the extended left hand holds a vase, out of which a slender stream falls to the ground between the altar and the monster drawing the chariot. The altar is rectangular, with a height nearly double its breadth, and the upper-front corner cut out so as to make a step or shelf. On the altar are two lines, apparently representing thin loaves of bread. The whip of the god in the chariot extends back so as to be over the head of the worshipper.

This extraordinary cylinder has no parallel, to my knowledge, and it is important to learn its period and its meaning. The material of the cylinder is shell, the central cone of one of the helix shells of the Persian Gulf. So far as I know, this material was never used except in the more archaic period. From it are made large thick cylinders of the same size and shape as the archaic Babylonian cylinders of serpen-

tine or other harder stone. The material and shape are almost conclusive that this cylinder also is archaic, that is, of a period of from 2500 to 4000 B. C. With this agrees the form of the altar, which I have never seen except on an archaic cylinder. It is to be found on a seal figured in Ménant, *Glyptique Orientale* (I, p. 163), and on another cylinder now belonging to the Metropolitan Museum, figured by me in a paper on *A Babylonian god of Agriculture*, in this JOURNAL (vol. II, p. 263). Besides this old form of altar, the figures of the god in the chariot and of the worshipper are characteristically archaic.

But we must turn to those elements which are unfamiliar and new. On a number of other cylinders we have chariots drawn by animals, but none of them, apparently, are archaic Babylonian. Such cases are found in Ménant, *Pierres Gravées*, II, pp. 75, 82, 120, 166; Lajard, *Culte de Mithra*, xli, 3; LIV, B, 10; Cullimore, *Oriental Cylinders*, No. 6; and De Clercq, *Catalogue Raisonné*, Nos. 284, 286, 287, 310 (some of which are duplicated). All these are as late as the Assyrian or even the Persian period, and not one has a four-wheeled chariot of this shape. In Assyrian art, the chariot is two-wheeled and the wheels are spoked, while these are evidently solid. Both the body and pole of the chariot are peculiar, and, so far as I know, unlike those of any later chariot that has been figured.

The nude female deity, rising between the wings of the monster drawing the chariot, is also unique. The fact that she is nude suggests antiquity, as we know that at a quite early period even Gisdubar, who is nude in the more archaic cylinders, becomes decently clothed. The only known form of a nude goddess is that of the goddess whom Lenormant calls Zarpanit, and Ménant calls Beltis, represented with arms across her breast, and in front view. This, if the same deity, is in an entirely different attitude. I have already said that her head-dress is of an ancient type. She holds in each hand the object already described as formed of three waving lines, which is evidently a representation of lightning. Its identification with the lightning can be proved by a glance at the figures of Ramānu, the god of the atmosphere, who holds in one of his hands a symbol of lightning similar in shape: beside the many seal-cylinders with this representation, the most important example is perhaps that in the Malthai relief (Perrot et C., *op. cit.*, fig. 313) in which the forks are distinctly wavy. That it is a weapon, would be suggested by comparison with the famous great figure of Bel fighting the dragon, from Nimrūd, figured in Lajard, *Monu-*

ments (second series, pl. v). In that figure, the god's sword and scimitar hang by his side, and he holds in each hand (as this goddess does) a double trident consisting of three waved prongs, just like this we are considering, except that in the middle, where the hand grasps them, the three as held by Merodach are reduced to a single connecting rod or handle. We can hardly go astray in supposing the weapon to be the same, but the simpler form on our cylinder suggests greater antiquity.

We now come to the monster drawing the chariot. It is as fully developed as on the Nimrûd sculpture just mentioned. I confess that I am startled to find it in this form, especially as I had come to think it was to be found, in Babylonian art, only in the upright, crabbed, conventional form on the hematite cylinders. But, even here, it must be considered that these hematite cylinders are among the older of the class, and that there must have been a free unconventional prototype for the established conventional form. Perhaps some of the best illustrations of the conventional upright dragon on the hematite cylinders are found in De Clercq, *op. cit.*, figs. 73, 74, 75, 76. In figs. 73 and 75, the dragon is attacking a cowering kneeling human figure; in fig. 74 it is fighting with a lion; and, in fig. 76, it is fighting with Eabani. These are among the freer ones of this form, and they are all on the short, thick hematite cylinders which are the oldest of this material, and form the connecting link between the slender hematites of the second period and the thick shell, serpentine and jasper cylinders of the earliest period. The very freedom and strength with which the design is drawn on the cylinder now under consideration is evidence of its archaic character. It is well known that the oldest cylinders are drawn with the most liberty and vigor: they far excel the later Babylonian ones in composition and attitude. On this cylinder, the god holding the whip, the goddess with the weapon in her hand, and the monster drawing the chariot are all drawn with a freedom which allies them, in artistic style, with archaic examples of the art; and this only confirms, what seemed proved by the material and shape of this cylinder, that we have here a precious example and a very ancient illustration of a mythologic scene from Southern Babylonia.

What, then, does it represent? It is a god, in a chariot drawn by a composite monster of the Tiamat type, and accompanied by a goddess carrying weapons of conflict. This is the mythologic group before which the worshipper pours his libation. I venture to see in this group the god Bel-Merodach going forth to conflict, or possibly

returning from it. Now let me quote the passage from the fourth tablet of the creation-series describing the arming of Merodach:

"They [the gods] gave him a weapon unrivalled, consuming the hostile:
² Go (they said) and cut off the life of Tiamat;
 let the winds carry her blood to secret places.³
 They showed his path and they bade him listen and take the road.
 There, too, was the bow, his weapon (which) he used;
 he made the club swing, he freed its seat;
 then he lifted up his weapon (which) he caused his right hand to hold;
 the bow and the quiver he hung at his side;
 he set the lightning before him;
 with a glance of swiftness he filled his body.
 He made also a snare to enclose the dragon of the sea.
 He seized the four winds that they might not issue forth from her,
 the south wind, the north wind, the east wind (and) the west wind.
 His hand brought the snare near unto the bow of his father Anu.
 Then Bel lifted up the hurricane, his mighty weapon.
 He rode in a chariot of destiny that fears no rival.
 He stood firm and hung the four reins at its side."⁴

Our cylinder seems to give us Bel-Merodach in his chariot, riding forth armed to the conflict. He is drawn by a monster like that which on later cylinders accompanies him, and which I have identified with the evil wind. "He set the lightning before him" says the poem: and here the goddess, who precedes him, is armed with the lightnings, which in other figures the god himself hurls; and, indeed, on some cylinders (PL. XVIII-3) the arrow with which he shoots Tiamat is pointed with a trident, identifying the arrow with the lightning. This triple-waved line is the chief element in the trident-weapon generally carried by a god who often leads a bull by a rope, but sometimes leads a winged dragon of the form now under discussion, as in Lajard, *op. cit.*, XXXVII, 1; see, also, my article on "*Human Sacrifices*" on *Babylonian Cylinders*, JOURNAL, vol. v, fig. 19.

If our deity in the chariot be Merodach, the goddess who accompanies him is his wife, Zarpanit. She is also known under an old name Gašmu, and may be a form of Belit. I have said that the frequently-appearing nude goddess, with arms akimbo and in front view, is identified by Lenormant with Zarpanit, and by Ménant as one of the confused forms of Belit-Ishtar. I can hardly doubt that we have here one of the early, free forms of Zarpanit, wife of Bel-Merodach, which later were conventionalized and fossilized into the front-view, nude

⁴ SATCE, *Hibbert Lectures*, pp. 380-1.

goddess, with arms across the breast, which so often appears on the cylinders.

We have, then, in this cylinder, one of those precious early examples of Babylonian art, when mythologic designs were in the formative period, when full pictures were made and the artist's originality had not yet been reduced to the reproduction of conventional symbols and hints. It is these early cylinders that will bring us most fruit for our study; and this one gives, apparently, an episode in the story of the beneficent demiurgic Bel-Merodach, and shows him to us riding out to conflict with the powers of darkness and disorder, and accompanied by his wife Zarpanit, carrying his weapons, and by the monsters of the air which he tamed to his service.

WILLIAM HAYES WARD.

INTRODUCTION OF GOTHIC ARCHITECTURE
INTO ITALY
BY THE FRENCH CISTERCIAN MONKS.

II. THE MONASTERY OF SAN MARTINO AL CIMINO NEAR
VITERBO.

[PLATES XIX, XX.]

HISTORY OF THE MONASTERY.—On one of the ridges of the classic Mons Ciminus, about eight miles from Viterbo, stood a monastery founded by the Benedictines at an early date.¹ It was then connected with the important monastery on Monte Amiata,² and more than one document in the archives of Orvieto attest this fact. Little is known of its early history :³ its interest for us commences when it was handed over to the Cistercian order in such a state of ruin and desertion as to be uninhabitable. The order appears to have demurred at the idea of maintaining its languid existence, for it was at a time when the attempt was being made (in 1151) to curb the injudicious, almost intemperate, spread of the order by the foundation of a great number of unnecessary monastic establishments.⁴ In this, as in many other cases, Papal insistence finally prevailed, and in 1206, according to Ughelli, the monastery was occupied by Cistercian monks from Pontigny. A few words regarding this fact, well known in monastic annals, will give a good basis for a judgment on the date and origin of the buildings whose description is to follow : it is condensed from Ughelli, *Italia Sacra*, t.

¹ A page is devoted to the monastery, by Cav. R. OJETTI, in the *Mostra della Città di Roma* (1884), pp. 153-4. These remarks are, however, founded on nothing but drawings of the façade and apse, the two parts of the church that do not belong to the original structure.

² JANAUSCHEK, *Orig. Cisterc. tom. I*, p. 231.

³ "From a parchment of 1066 and another of 1044 from the archives of *S. Martino in Montibus* or *al Cimino*, now transferred to the archives of the Vatican, as is noted by GARAMPÌ (*Iter Viterbien. aduers.*, vol. III, No. 135, *MSS. Arch. Vat.*), we find that the Benedictines of *S. Martino al Cimino* had at that time jurisdiction over the church of *S. Pellegrino*, around which were some possessions of that Abbey and of *S. Giovanni in Coccia* or *Ciocola* : " CRISTOFORI, *Le tombe dei Papi in Viterbo*, p. 6.

⁴ DOHME, *Die Kirchen des Cistercienservordens in Deutschland*, etc., p. 18.

I, c. 1403-4,⁵ with reference also to Janauschek (*Orig. Cist.*, t. I, p. 124),⁶ and the authorities which he there quotes.

It was in 1150 that Pope Eugenius III gave the monastery to the Cistercian order, by which it was placed under the jurisdiction of St. Sulpice in Savoy, one of the main offshoots of Pontigny. This connection with St. Sulpice lasted for over a half-century without producing any improvement in the condition of San Martino. The general chapter of the order consequently determined to cut off all connection with it. It was then that Innocent III came to its aid. From his letter, published by Ughelli, we learn that the monastery was in abject poverty and contained but three monks. The Pope,

⁵ *Hac tempestate* [time of bishop Gensoni of Viterbo, 1149-79] ac Petro Proceule vetus monasterium S. Martini Ord. S. Benedicti in montibus Cimini octavo ab hac urbe lapide, alieno vere oppressum, et fere ad nihilum reductum, Eugenius III monachis Cisterciensibus reformandum et incolendum tradidit. Verum cum sub Innocentio III ad extremam pauperiam relictum esset, generale capitulum Cisterciensium (ut MARQUEZ scribit in Annal. Cist. Ord. tom. 3) atque Innocentius ipse zelo inter se religionis decertant; illud, dum penitus deserere statuit, quod non poterat in observantia conservare, hic cum conventum de novo illuc adducit; et liberandis oppignoratis fundis mille libras argenti, augmento dotis ecclesiam integram donat; ex quorum fructibus ibidem sustentarentur. Constat utrumque ex ejusdem Papae litteris expeditis anno 1206 ad Petrum abbatem, fratresque, qui tunc recens venissent ex Pontiniaco Gallias ejusdem ordinis coenobio, in hunc modum ex Reg. Vatie. Nicolai IV ubi Innocentii litterae confirmantur.

⁶ Illustre illud aeternum in cacumine montis Cimini, terra Viterbiensis et patrimonio S. Petri situm nullique diocesis subiectum, perantiquae familiae Benedictinae sedes erat, cujus restaurator jam Gregorius VII fuisse traditur. Quum autem saeculo XII aere alieno reddendo impar et fere ad nihilum reductum esset, ab Eugenio III P. M. a. 1150 monachis Cisterciensibus et S. Sulpitio (de linea Pontiniaci) advocatis reformandum traditum est (Bl. Pa. Ha. M. Du. V. Vi. N. W. Bl.; 1132; A. R. E. EM. L. La.). De antiquioribus obbitibus nil constat; unius sine nomine memoria in statuto XI capitulo generalis a. 1195 occurrit.

Verum quum enormia quibus illa abbatia laborabat damna a Sulpitiensibus omnem industriam adhibentibus per L annos reparari non potuissent et capitulum generale eam deserendam esse constituisset, ex Innocentii III imperio Pontiniaco resignata est, quo factonovus conventus Petro abbate duce inde emissus S. Martinum occupavit eumque liberalissimis donis a dicto pontifice Cal. Febr. 1207 (perp. 1206) collatis adjunctis ecclesiae et ordini Cisterciensium consecravit; ubi silentio praeterire non licet, Rainerium Capocium, cardinalem nostrum, de monasterii aedibus rursus aedificandis egregie promeritum esse. Quod ad tempus quo Pontiniacenses advenierint attinet, Moruntius (quo teste necimus) pro a. 1129 contendit, Jongelinus (*JO. St. JC. V. Bo.*), *Historia Pontiniacensis*, Chaillon pro 1200, Bl. pro 1203, Na. P. pro 1216 (alio loco, ubi S. Martinus perperam filia Vallis-Ecclesiarum vocatur, pro 1206); sed tamen considerantes matris mutationem a capitulo generali a. 1207 approbatum esse, porro Ughellum ex codice S. Salvatoreis Montis-Amiatas referre, conventum a. 1207 advenisse, Innocentium III denique laudatis litteris eodem illo anno 1207 "ad Petrum abbatem et fratres qui tunc recens venerant" dedisse, eos initia a. 1207 S. Martinum ingressos esse recte asseritur.

however, promised many gifts if the parent monastery of Pontigny would consent to send there a colony, and if the general chapter would rescind its resolution to separate from it. Early in the year 1207, the colony from Pontigny, under abbot Peter, entered San Martino. Innocent III paid all its debts and endowed it, as Ughelli relates, and within a few years Card. Rainerius Capocci gave many gifts and enabled the monks, under his supervision, to rebuild the entire monastery. So generous was he toward it that he, rather than Innocent III, is regarded as the real founder. I will here repeat two extracts given by Ughelli from codices of the monastery of Monte Amiata that are almost contemporary with the event. A *chronicon* of the monastery says: *Anno 1199 Innocentius III sedit an. 18 m. 4 d. 22. Hic multa bona fecit. Hic renovavit monasterium S. Martini de Monte Viterbii et anno 1207 de Pontiniaco fecit conventum ibi venire.* Another codex, after reporting the facts mentioned above, adds: *Raynerius cardinalis noster non multo post tempore fere totum monasterium reaedificavit et bonis multis locupletavit.*

Cardinal Capocci belonged to the Cistercian order, and when he became one of the leading ecclesiastics of his day never ceased to advance its interests with a strong and generous hand, until later in his life he transferred his favors largely to the new and more popular Dominican order, a fact which seems to have taken place before 1220. It was mainly through his influence and example that Viterbo became perhaps the greatest monastic centre in Italy during the first half of the thirteenth century. The construction of the buildings of S. Martino was one of his earliest undertakings, and we are led, without regard to the style of the construction, to date them between 1207 and about 1225: before the later date we find him erecting in Viterbo itself the monasteries of S. Maria della Quercia, S. Maria di Gradi, S. Maria della Verità, and others; some of which were intended for the Cistercians, but all were finally handed over to the Dominican order, under the influence of his changed affections.

The old connection with the great monastery of S. Salvatore di Monte Amiata appears to have been retained, especially after it joined the reform, in 1228, and had brought under its sway a number of churches in Viterbo and its vicinity.⁷

MONASTIC BUILDINGS.—The buildings that remain from the old monastery date back to the time of Innocent III and Cardinal Capocci,

⁷ JANAUSCHER, *op. cit.*, p. 231; CRISTOFORI, *op. cit.*, pp. 5, 7, 9, etc.

and show it to have been an establishment of considerable size and importance; almost a rival to the more southern colonies of Casamari and Fossanova. All but the church and chapter-house are in a ruinous condition, owing principally to the construction, on the site, of the great Pamphili palace. In 1564, the monastery had become extinct, and the property passed into the possession of the Vatican chapter. Toward the middle of the XVII century, it became the property of the Doria family, who are still its owners. Donna Olimpia Pamphili, sister-in-law of Innocent X, who died in 1657, made the site her favorite residence. She built a great palace within the former precincts of the ruined monastery, restored the church in the *barocco* taste of the time, and was buried there, as is shown by two inscriptions, one placed over the door of entrance, the other in the pavement in front of the high altar.

The area of the monastery not occupied by the palace is mainly filled with humble dwellings, built partly among the mediæval ruins, and, in some cases, leaving the old structures intact: some are even attached to the walls of the side-aisles of the church.

CHURCH.—Contrary to the usual Cistercian custom, the church is placed to the right of the monastic buildings. The façade is badly restored. Its general design can still be discerned in the central portion, especially in the portal, but the restorations have been so radical as to obliterate nearly all traces of the original work. It is divided vertically into three sections. In the centre is a round-headed portal surmounted by a gable, with a single column on either side; above it is a large false pointed arch reaching up to the gable, in the summit of which is a modern rose-window. Above this gable is a part of the ancient façade, with a round-headed window and a false horizontal termination. On either side, over the aisles, rises a tower in three stories, only the upper one being provided with windows. These towers are of late work, and the church did not originally possess any.

The interior (PLATE XIX) has remained practically unchanged in its lower portion. A few *barocco* altars were set up in the side-aisles by Donna Olimpia, thus closing their windows, and the beautiful tone of the peperino stone was covered with a coat of whitewash. The apse was disfigured by a coat-of-arms and some pallid decoration in fresco.

It is interesting to compare this interior with that of Fossanova and also with the French transitional interiors. Some twenty years or more intervene between Fossanova and San Martino; and the changes that had taken place in France during this time are clearly reflected in the

latter of these two buildings. The Cistercians of Pontigny had been influenced by the transitional buildings of the Ile-de-France erected shortly before 1200; and in this case they carried out what was perhaps the favorite type, that in which piers alternate with columns along the nave. This church of San Martino is as truly built by French architects and in an unadulterated French style as is Fossanova; but the style is less severe; it is less Cistercian, and conforms more to the type of the Ile-de-France; the prototype is not Clairvaux but Pontigny—for each of the four main foundations of Cîteaux seems to have possessed a variation of the general architectural type.⁶

San Martino is lighter in its proportions, and yet, instead of showing increased height, we find that its main nave is broader in relation to its height, and this must have been still more marked before the vaults were raised. A consequence is the omission of the row of small windows between the arcades of the nave and the clerestory, and a consequent diminution in the slant of the roof of the side-aisles. There is also a diminution in the verticality of lines, owing to the system of vaulting. The alternation in the supports was intended, of course, to provide for the sexpartite vaulting, as at Notre Dame, the choir of Senlis, and the cathedrals of Mantes and Laon; but this original intention was here either lost sight of during the construction, as in the naves of the cathedrals of Senlis and Noyon, or a quadripartite vaulting, like the present one, was a later substitution.⁷ Thus, we find, at present, an engaged colonnette rising only from the heavy piers. The result of this is to make the present vaulting of the nave nearly square and of proportions similar to those of the aisles. There is hardly any domical character to the vaults, through the lightness and circular form of the transverse arches. The supposition that it was the original intention to use sexpartite vaulting is confirmed by the size of the windows and by a couple of the original intermediate vaulting-shafts which were left on either side in the further bay of the nave. Of the present windows, those over each column were evidently cut at the time of some restoration of the church, and involved the closing of the two original windows placed on either side of these columns over the point of each arcade and the demolition of the buttresses on the exterior that corresponded to the intermediate column. This probably

⁶ See ground-plans in VIOLLET-LE-DUC, *Dictionnaire*, vol. 1, under *Architecture Monastique*.

⁷ In most transitional churches in France the supports and the present vaulting do not correspond, on account of the substitution of quadripartite for sexpartite vaults, or vice-versa.

coincided with the raising and rebuilding of the vaults and changing them from the sexpartite to the quadripartite form. On account of the transept, the new windows in the furthest bay were opened not in the centre but to one side of the new vaults, and this led to the preservation of the vaulting-shafts which were removed in every other case. Traces of the early windows that have been closed can yet be seen, and the late date of the present vaults is proved, not only by the character of their mouldings but by the additional height given to the wall, which is so noticeable on the exterior. In some cases, however, several courses of the original vaulting-mouldings have been sufficiently preserved to show that the wall or longitudinal ribs sprang from a greater height than the diagonal and transverse ribs, and that both the latter are nevertheless much stilted. There is a lack of structural logic and continuity in this system of San Martino as it originally existed. The vaulting-shafts do not spring from the ground, in the case of the main piers, or from the capitals of the intermediate columns, but from the clerestory cornice. They here rest upon a single shaft¹⁰ of the same size as that engaged in the pier. This shaft ended in a typical Cistercian consol over each column and directly on the capital over each pier, without the intervention of any base.

The mouldings of the main arches and its supports are original, and are far in advance of those used in the other Cistercian buildings of the time in the Roman province, being analogous to the mouldings of the transitional buildings of the Ile-de-France. The same cannot be said of the foliage of the lower capitals, which is lacking in delicacy. The capitals of the intermediate shafts are slightly more advanced; they are triple, and thus form a somewhat awkward transition from the quintuple vaulting-mouldings above to the single shaft below.

The ground-plan (PL. XX) shows eight bays in the aisles and four double bays in the nave; a transept with two square chapels on either side; and a pentagonal apse instead of the usual square end. The side-aisles are square, measuring 4.15 met. between the axes; the width of the nave is 8.75 met.; the total length is about 57 met. in the interior. The dimensions are thus a trifle less than those of Fosanova; the walls are not as thick, nor the supports as heavy, but the span of the arches is slightly greater, thus producing greater height

¹⁰ The wall is coated with a thick layer of plaster: it is possible that a slender shaft once existed on either side of the main one, corresponding to the small capitals under the cornice, and that it has been covered by the plaster. I did not think to examine this point when on the spot.

and lightness of the side-aisles. The simple ribbed cross-vaults of the aisles appear to be original, and are supported along the wall by a half-column engaged in a pier. The aisle-windows are now closed. The five-sided choir is of later date than the rest of the church, and may have taken the place of an original square end. Its construction is assigned by Signor Ojetti to the XIV century, without any proof. It was probably built at the same time that the vaulting and windows were remodelled. An examination of the exterior is not conclusive, but it proves (1) the raising of the vaults of the nave; (2) the partial rebuilding of the side-chapels and of a part of the transept, at the time of the reconstruction of the apse; (3) that the vaults of the transept are the only original high vaults that remain.

A comparison of the capitals and mouldings with those of French churches shows them to belong to the time when the transitional forms were passing into those of developed early Gothic. The outlines of the bases are very similar, for example, to those of Senlis, but they are much higher and heavier in relation to their shafts than those of any French church with which I am acquainted. They are of unequal height; those near the door being lower than the rest, as may be seen in the foreground of *PLATE XIX*.

CLOISTERS.—The arrangement of the monastery is somewhat peculiar, probably being influenced by that of the earlier Benedictine structures. The Pamphili palace has absorbed the front section with its dormitories and one side of the main cloister, whose foundations are still visible in the cellar of the palace. A sketch in *PLATE XX* gives all that could be ascertained, by a cursory examination, of the general plan. The main walls are almost everywhere preserved, but the details of exterior and interior have been ruthlessly made over: the monastic halls have been turned into shops and peasants' dwellings and store-rooms. At many points, the original round-headed windows remain; most of them are single, some double with a dividing shaft. There appear to have been two cloisters, both now destroyed. The north arm of the monastery, projecting from the transept of the church, is fairly well preserved. A corridor with cross-vaults has on either side one or more early rooms, those nearest the church being probably the treasury and sacristy. Then comes a section at right angles and parallel to the church, which formed, apparently, the division between the two courts or cloisters. At the corner of the second court, on the east side, is the chapter-house, which is locally termed the refectory, still in fair preservation.

CHAPTER-HOUSE.—The chapter-house corresponds in style to the church. It is even lighter and more graceful in comparison with the corresponding chapter-houses of Fossanova and Casamari, and it approaches far more the style of some French refectories and other halls of the XIII century. It measures 20 by 9 metres, and is divided into two aisles by three central piers. These piers are of the same general plan as those of Fossanova and Casamari, a central cylinder or octagon around which are grouped eight shafts, upon whose capitals rest the mouldings of the vaults. But the æsthetic effect is here made quite different by the greater slenderness of the pier and delicacy of the mouldings, as well as by the wider spacing of the supports. The consols that support the arches against the walls are of a charming acorn-shape design, and the mouldings of the arches are quite advanced in style. A round-headed window was originally placed in each bay, but, of these eight, nearly all are closed. A stone bench encircles the entire interior. The plan and view of the interior (PL. XX) will make a long description unnecessary.

Although this is, according to tradition, the refectory, it appears to me, for various reasons, to be the chapter-house: *first*, its position in the arm of the monastery, that is, at right angles with the transept of the church—the usual place for the chapter-house in Cistercian establishments; *second*, the analogy of form and construction to many other chapter-houses of the order, and its dissimilarity to the majority of the refectories of the order; *third*, the row of stone seats which surrounds the hall, as in all chapter-houses.

The monastery of San Martino does not present the diversity of style which we find at Fossanova and Casamari. It was built *d'un seul jet*, within the space of not many years. The date of 1207 is the earliest we can assign to the plan and foundations: the presence of round-headed windows everywhere forbids our giving a long *terminus ad quem*. Probably the construction was finished in about 1225.¹¹ Any earlier date than this would be in contradiction with the extremely rich mouldings of the ribs and cornices of the church, which correspond with those of French buildings usually dated from 1210 to 1230. This advantage, however, is more than counterbalanced by the fearful mutilations which it has suffered.

A. L. FROTHINGHAM, JR.

¹¹ CRISTOFORI (*op. cit.*, p. 9) gives the date 1228 as connected with the church, but without any indication of what it applies to.

II. ARCHITECTS.

[PLATE XXI.]

During the summer of 1889, I spent several weeks in exploring the Roman province for the study of its inedited monuments. Although expecting to publish, before long, a study on the subject of the mediæval artists of this region, I will here describe the works of some architects whose names, so far as I know, are new.

MARTINUS.

This Martinus is an architect of the twelfth century, and, judging from the style of his work, he may be considered to have been one of the best. His inscription is on the porch of the church of Sant' Erasmo at Veroli, the ancient Verulæ. This city of the Hernici, like its neighbors Anagni (Anagnia), Alatri (Alatrium), and Ferentino (Ferentinum), was among the cities of Campania that remained throughout the Middle Ages under the direct control of the Popes. The art of these cities is strictly Roman, except in cases of some strong local influence like that of the great neighboring monasteries of Casamari and Fossanova. At Segni, Anagni, and Ferentino are still records of the activity of the Roman families of artists in the XII and XIII centuries, the Cosmati, the Vassalletti, and the school of Paulus. To these should now be added Martinus. Some years ago, I had a photograph taken of the Romanesque porch of the church of SANT' ERASMO AT VEROLI (PL. XXI). Again, last summer (1889), I passed through this mountain village, and, while resting the horses, sat on the parapet in front of the porch admiring its strength and simplicity, the harmony of its proportions and tone. The sun was shining at such an angle that I noticed, for the first time, some letters cut in the second row of stones under the cornice, between and above the left-hand and middle arches of the porch. The characters were large and carefully cut in the pure classic style of about the middle of the XII century, and read: EST MANIBVS FACTVS MARTINI QVEM PROBAT ARCYS. Two facts are evident: (1) Martin

was proud of his work—the porch, which he calls *arcus*, he evidently regards as a good example of his style; (2) he considered that he had a style of construction peculiar to himself, for he says that this work can be recognized as his by its style.

The porch consists of three round arches of unequal span and height, corresponding to the three aisles of the church. Of the church itself I need not speak, as it is quite modernized; and I will omit the tower also, which, though mediæval, seems to be by another architect. A second story, with three round-headed windows, was added to the porch at the time of the restoration of the church. A flight of steps leads from the street to a platform from which one enters the porch by four steps; three more lead into the church. The dimensions of the porch are approximately as follows: length, 31 ft.; width, 14 ft.; height, 26 ft. The interior consists of three simple unribbed cross-vaults on a square plan, separated by rather heavy *arcs-doubleaux* which rest upon engaged columns with composite capitals attached to the outer piers, and upon simple pilasters. The central arch, corresponding to the nave, has of course a greater span than the side arches, but these, also, are unequal in size, that on the left being much the lower and narrower. The cause of this seems to have been the lack of space on that side.

Two points of detail are especially to be noticed: (1) the profiles of cornice and mouldings, and (2) the style of the decorative sculpture. The use of a retreating arch in interiors was common with architects of the Roman School, and it is also to be observed in the buildings erected in this region by the Cistercian order between about 1175 and 1225. Here we see it. One naturally turns for comparison to the few porches of the kind in the province—at Casamari, Casanria, and Piperno. But here the profile is different, the two planes being connected by the soft flowing line of a concave moulding or scotia, instead of forming right angles. But in earlier buildings, slightly anterior, in fact, to the porch of S. Erasmo, we find the use of the double angular arch; for example, in the doors of the neighboring cathedral of Ferentino (end XI cent.), and in the windows of the cathedral at Anagni (middle XI cent.). In interiors, the same device was used to break the monotony of the blank walls. Earliest of all is the basilica of S. Elia, near Nepi, a work of the X or early XI century, where the arches are supported on columns. In the XII century, the columns are replaced by clustered piers, as in the cathedral of S. Maria di Castello at Corneto. There is nothing

remarkable about the heavy capitals or the profiles of the rather clumsy bases of the columns or those of the bases of the piers: of greater elegance is the cornice that frames the upper part of the porch. The taste of the artist shows itself in the form and decoration of the archivolts that frame the arcade. They are the key-note to the entire porch; they give to it dignity and peculiar style, add breadth to the arches, help in the play of light and shade, and delight by the delicacy of their sculpture. The details of this decoration in the central archway is as follows. First, a row of trefoils connected by stems, every other one being reversed: a similar decoration, but more advanced and without reversal, is found in the main doorway of the cathedral of Civit  Castellana executed, in about 1180, by the Roman artists Laurentius and his son Jacobus. Next comes the familiar classic egg-and-dart moulding; then, the equally familiar and classic pearl ornament; and, finally, the row of cubes placed at intervals which on a somewhat larger scale was so popular an appendix to the under part of cornices, during this and the following century. A similar but less elaborate decoration encircles the other arches. All the elements are classic; and the execution itself is worthy of an artist of the best period of the empire. With Martinus, as with the earlier Cosmati and the Vassalletti, the classic tradition was supreme; and this is but another proof that it entered into the smallest details of their work. After examining these archivolts, it is safe to say that the engaged columns below are by another hand than that of Martinus.

The porch of Sant' Erasmo is, in my experience, the finest in Central Italy. With the exception of the numerous architrave porches of the Roman school with their Ionic columns and classic details, porches extending the entire width of the church are quite unusual throughout Italy, whereas in France, for instance, they are quite common. Italian architects were either satisfied with none, or confined themselves, after the fashion of earlier examples in Rome (Santa Prassede, etc.), to building out the central portal, as at Verona, Modena, Trento, etc. One has to roam over Lombardy and Tuscany quite generally before finding wide porches: perhaps the finest example is that of the Cathedral of Lucca added to the church in 1204. Monastic churches, however, were more likely to have porches: in France the closed porches of the Clunisian churches are almost as large as the body of the church. The Cistercian and Benedictine porches were more modest. Those of the second half of the XII century and the beginning of the XIII built

in this region are similar in general form to this one of Veroli, but all unite to differ in one respect: their central arch alone is round-headed, those on either side are pointed, being thus enabled to keep the same height while having a smaller span, corresponding to the narrower side-aisles. The Cistercian monastery of Casamari has a porch which dates from about 1203, if not earlier: the corresponding earlier porch at the monastery of Fossanova has been destroyed; but we can conceive what it was from a study of the porch of the cathedral of the neighboring Piperno, constructed, probably in imitation of it, by the architect Antonio di Rabatto, shortly after 1180. A few years earlier, a similar porch was built before the Benedictine church of S. Clemente di Casauria in the Roman Abruzzi. All of these are lacking in the peculiar qualities that form the charm of the *chef-d'œuvre* of Martinus, as it would be easy to show, were this the place to do so.

GRIMUHALDUS.

Crypts were even more important adjuncts to churches than porches, in this part of Italy, especially during the Romanesque period: this was partly on account of their frequency, partly by reason of their extent. In my study of the architecture of the XI and XII centuries in the Roman province, I found that the crypts were often the only part that remained of a church that had been torn down or remodelled by the vandals of the XVIII century. Though, at first sight, there is an apparent monotony in these crypts, a careful study cannot fail to reveal the individuality of each one. One of the largest and most interesting is that of the cathedral of Sutri. This church was the work of Roman architects, for the town is only about forty miles to the north of the Eternal city,¹ and the building still bears traces of their handiwork. An inscription of 1170 informs us that Nicolaus de Angelo, with his son, executed the high altar, probably, after the usual fashion of the Roman artists, with a beautiful decoration of mosaic-work. It is now destroyed: but a cornice with a XII-century inscription, mentioning the name of bishop Petrus, which I disinterred from the neighboring yard, may belong to it. At all events, the central doorway, with its mosaic-work, fragments of the old pavement, the campanile, and parts of old frescos, still remain of the XII-century work, after the usual process of destruction had been indulged in during the XVIII century. Fortunately, the crypt, though blocked up,

¹ See my article, *An early rock-cut church at Sutri*, JOURNAL, v, pp. 320-30.

was left untouched, and, as it was being re-opened at the time of my visit during the summer of 1889, I was among the first to descend into its depths. The only change it had suffered was the removal, at the demolition in 1743, of four of the columns to be placed in a chapel of the church above. I read the name of the architect upon the capital of the first column opposite the flight of steps that leads down from the left aisle: † GRMVHALDV | PRB < ACCOL'A, *Grimuhaldus presbyter accolyta*.

We do not meet with monk-artists nearly so often in Italy as in the rest of Europe, during the twelfth century; and the lay-artists had almost a monopoly, especially in this province, where they were formed

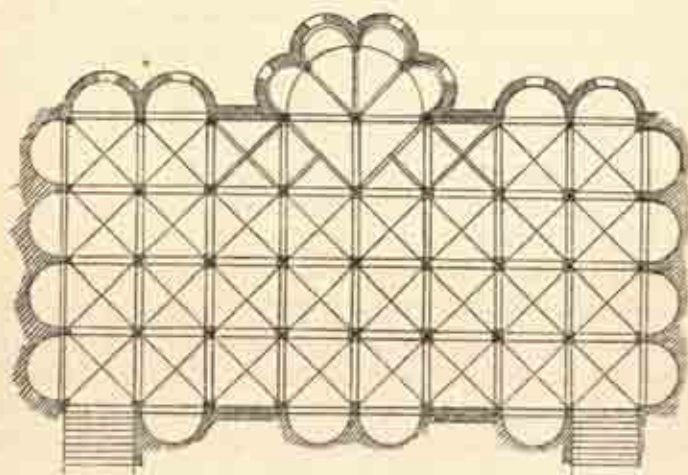


FIG. 1.—Ground-plan of the Crypt of the Cathedral at Sutri.

into regular schools. But here is an exception. A priest of the cathedral was also the architect of its crypt at the time when the entire edifice was made over about the middle of the twelfth century. This construction is so unusual in its form, is planned on a scale so large and sumptuous, and carried out with such care in its details, as to make it worthy of being placed in the front rank of Italian crypts (*Figure 1*). The vaults are supported by twenty-two columns, seven for each of the three rows that divide the crypt into four aisles, and one opposite the centre of the apse. Each aisle ends, not against a flat wall but in a small apse or semicircular niche. Four of these niches form the apse, and sixteen others surround the rest of the construction. This entire

arrangement of niches is singular and original: I do not remember to have met it elsewhere. The quadri-apsidal choir is also strange in a country which so staunchly retained the small and simple semicircular apse of the basilica, vaulted with its semi-dome. But this is not the only peculiarity. While all the rest of the spaces between the columns are covered with plain unribbed cross-vaults, the two opposite to the choir have tripartite ribbed vaults that join the quadripartite vault of the choir, which is also ribbed. This is an example of comparatively elaborate vaulting interesting for the time and region, as ribs were not used in this province, barring exceptions, until the latter part of the century. The vaults are all separated by transverse arches, and the columns are not waifs and strays from the ruins of older buildings, as is so often the case at this period: they are monoliths of good proportions and with fairly-carved capitals, of equal size, quarried for the building.

PETRUS GULIMARI DE PIPERNO.

The third architect on my list of inedited names is a native of the city of Piperno, the ancient Privernum, situated in the Monti Lepini in a region which before the Italian occupation was a centre of brigandage in the Papal States.² Only a few miles away, down in the marshy swamps of the valley below, was the largest and most famous of the Cistercian monasteries of Italy, Fossanova. Against the opposite range of hills are dotted several hamlets. Principal among these is the town of San Lorenzo, now called Amaseno. When Pope Innocent III, in 1208, visited Fossanova and the towns and monasteries on the opposite line of Sabine hills, Anagni, Alatri, Ferentino, Veroli, and Casamari, he also stopped for a night at San Lorenzo. Then, the present church was not built: this took place more than a half-century later. When the work was commenced we do not know, but it was finished in 1291 on the fourth of April, according to an inscription on the pulpit. The architects, as the inscription tells us, were *Petrus Gulimari* of Piperno and his two sons *Morisū* and *Jacobus*. The copy of the inscription, made for me by Sig. Ettore Maldura, reads in this way, but there seem to be some mistakes in the reading, several of which I have corrected, though I remain in doubt as to the reading of the artist's name. The entire inscription reads: IN NOMINE DOMINI AMEN ANNO NATIVITATIS EIVSDEM MCCLXXXXI INDICIONE

² See my article on *The Monastery of Fossanova*, pp. 14-46.

QVARTA MENSE APRILIS PONTIFICATVS DOMINI NICOLAI PAPAE IIII
ANNO QVARTO OPVS HVIVS ECCLESIAE ET ISTIVS PVLPI TVS COM-
PLETVM FVIT PER MAGISTROS PETRV M GVLIMARI DE PIPERNO ET
MORISVM AC JACOBVM FILIOS EIVS QVORVM ANIMAE REQVIESCANT
IN PACE AMEN.

The church is a simple three-aisled construction, with pointed arches and windows, unribbed cross-vaults, and simple square piers with engaged columns. It is the clearest possible imitation, on a reduced scale, of the great Cistercian churches of Fossanova and Casamari, and doubtless the architects took the former for their model. In fact, it is probable that they graduated from the Cistercian school of architecture, which spread over this entire region during the last years of the twelfth and the entire course of the thirteenth century. I shall not describe the church any further, in order not to forestall the details which will be in place in the volume on Cistercian architecture in Italy on which I am at present engaged.

A. L. FROTHINGHAM, JR.

Princeton College.

NOTES.

COMMENT ON TARBELL'S "STUDY OF THE ATTIC PHRATRY."

I desire to offer a few comments on Professor Tarbell's study of the Dekeleian Phratry-Decree, which appeared in the number of this Journal for June, 1889 (pp. 135-53). It should be pointed out that Köhler's restoration of the last two lines of *A* gives 31 and 29 letters in each, respectively, instead of 30, and is therefore possibly wrong. Pantazidis restores 30 letters to the last line by reading ὁ ἱερ|εὺς τοῦ Δεκελείων οἴκου. τῷ Διὶ τῷ Ἐρκεῖω and ὁ ἱερεὺς τῶν Δημοσιωνίδων would give the right number. I only mention this as a possibility.

B-51. μαρτυρῶ (ὃν εἰσάγει ἑαυτῷ υἱόν) εἶναι τοῦτον κ. τ. λ. The words bracketed are not part of the oath, but a parenthetical explanation. The "his lawful son" is wrong. "I swear that this child (the child whom he is presenting as his son) is born in lawful wedlock." The oath may apply to the introduction of adopted children also: see Isaios, VII. 16: ἐστὶ δ' αὐτοῖς νόμος ὁ αὐτός, εἰάν τέ τινα φύσει γεγονότα εἰσάγῃ τις εἰάν τε ποιητόν, ἐπιτιθέναι πίστιν κατὰ τῶν ἱερῶν ἢ μὴν ἐξ ἀστῆς εἰσάγειν καὶ γεγονότα ὀρθῶς.

The weak point in Mr. Tarbell's comment is his explanation of *A*, line 30—the appeal to the Demotionidai. No one who reads through the document without prejudice, and in happy ignorance of the theories of German scholars, can possibly believe that the Demotionidai are identical with the *phrateres*—that the court of appeal is identical with the court from the decision of which appeal is made. Mr. Tarbell says (p. 152), "the years that have elapsed since he was on trial before disguise a little the inappropriateness of the word *ἐφίημι*;" but I am sure that, when I take the privilege, which I think he is wrong in conceding to other suitors, and appeal from himself to himself, he will reverse his decision.

This inscription, one other, and the texts of the orators, are the authorities on which we should base our view as to the constitution of the Attic phratries. In such matters we should begin by shutting our eyes to lexicographers, new and old, and be especially shy of hand-books.

A word, now, as to Mr. Tarbell's correct remark, that the laws of different phratries differed. At least three passages of *Isaios* confirm this: (1) III. 76, from which it appears that not all phratries enforced the enrolment of daughters (Mr. Tarbell's remark on p. 153 should be therefore corrected); (2) VII. 16 (already referred to), from which we may conclude that not all phratries required the legitimacy of adopted sons to be proved; (3) VIII. 18 (see Reiske's note). Not all phratries required *γαμηλίαν εἰσφέρειν* on the marriage of a member.

There is no difficulty in the parts of this document which relate to the *εἰσαγωγή* or *ἀνάκρισις*, which was contemporaneous, and indeed identical, with the sacrifice of the *κουρείον* (in *Isaios*, VI. 22, *ἀπηνέχθη τὸ κουρείον* is equivalent to "the child was rejected"). We learn, from B-13-21, that the *thiasoi*, from which the three witnesses at the *ἀνάκρισις* were drawn, were very small bodies: they must have comprised only the immediate relatives of the applicant. In the case of another phratry (*Isaios*, *ibid.*), it was in the power of the applicant's only son to prohibit the *εἰσαγωγή*. In the present case, if one son were the only other member of the applicant's *thiasos*, his opposition could be made ineffectual both at the *ἀνάκρισις* and at the *διαδικασία*.

It seems to me to be established by the texts from the orators quoted by Sauppe (*De Phratriis*, p. 8) that the *γεννήται* were a more extensive body than the *φράτερες*. The speaker in Demosthenes I.VII. 21 f., to prove that his father was an Athenian citizen, summons first his relations (*συγγενεῖς*), then his *φράτερες*, then his *γεννήται*, and then his *δημόται*. In the peroration of the same speech (87) we have the same order.¹ In *Isaios* VII. 16, the *φράτερες* and *γεννήται* are

¹ I doubt if the passage be right as it stands. The speaker is recapitulating the evidence; to make his recapitulation additionally effective he examines himself by the formula used in the *anakrasis* of the nine archons. Two slightly divergent versions of this formula have reached us (*POLLUX*, VIII. 85, and *Lex. Cantab.*, p. 670, both quoted in full by SAUPPE, *Ibid.*). It consisted of a series of questions, probably as follows: (1) Who was your father? (2) Were your ancestors on both sides, for three generations, Athenians? (3) What is your deme? (4) Have you altars of Zeus Herkeios and Apollo Patroos? etc. The speaker here asks himself and answers question (1); he then goes on, not to ask directly, but to answer implicitly, the other questions, with regard, however, not to himself but to his father, in order to adapt himself to the form in which the evidence was actually taken (see sections 20 f). *αἰεὶ οἱ τινες εἶναι μαρτυροῦσιν αὐτῷ*; (sc. *ὅτι πολὺν χρόνον*). *οὐδὲν γὰρ πρῶτον μὲν γε τέτταρες ἀνεψιοί, εἰς ἀνεψιαδοὺς, εἰς οἱ τὰς ἀνεψίας λαβόμενοι αὐτῷ*: so far he is answering question (2). *εἶναι* must, I think, be expunged, for it will be seen that, if it be retained, *ταύτης τινος αἰεὶ οἱ μαρτυροῦσιν* in the corresponding question relat-

mentioned as acting together, and having the same laws² and a κοινὸν γραμματεῖον. It would be difficult to tell from this passage alone if the φράτερες or the γεννήται were most extensive, did not Demosthenes enlighten us.³ If the γεννήται were a wider and less intimate association than the φράτερες, and if their laws were binding on the latter, it is not only natural, but necessary, to suppose that the Δημοτιωνίδαι here are γεννήται.

For the διαδικασία, of which A treats, the passage of Isaïos (vii. 16) is so important that it must be quoted in full: ἔστι δ' αὐτοῖς νόμος ὁ αὐτός, εἴν τε <τινα> φύσει γεγονότα εἰσάγει τις εἴν τε ποιητόν, ἐπιτιθέται πίστιν κατὰ τῶν ἱερῶν ἢ μὴν ἐξ ἀστῆς εἰσάγειν καὶ γεγονότα ὀρθῶς, καὶ τὸν ὑπάρχοντα φύσει καὶ τὸν ποιητόν· ποιήσαντος δὲ τοῦ εἰσάγοντος ταῦτα μηδὲν ἦτον διαψήφισθαι καὶ τοὺς ἄλλους· κἄν δόξῃ, τότε εἰς τὸ κοινὸν γραμματεῖον ἐγγράφειν, πρότερον δὲ μή· τοι αὐτὰς ἀκριβείας ἔχει τὰ δίκαια τὰ παρ' αὐτοῖς. The first and in some cases the only step a father had to take in order to get his son admitted to a phratry was the εἰσαγωγή, accompanied by the sacrifice of the κουρεῖον. In the case of this phratry, the father had to swear that the son was born in lawful wedlock, and it is to be assumed that, if he swore this, he was allowed to offer the κουρεῖον and the εἰσαγωγή was accomplished. But, in order that it should be ratified by registration in the common books of the γεννήται and φράτερες, it was necessary that the votes of the members should be taken. We do not learn if the vote here was taken on the day of the κουρεῶτις (as ap. Demosth. XLIII. 14) or after any interval of time. This was regarded as a stringent law, and

ing to his mother (68) must be taken in the same sense, and then φράτερες τῶν οἰκείων ταῦτα (ὅτ ταῦτά?) μεταρτηρήκασιν means φράτερες τῶν οἰκείων μεταρτηρήκασιν οἰκεία εἶναι, which is nonsense. It is evident that, in the concluding clause in 67, εἰθ' οἱ δημόται, &c. &c., there is, if not actually an answer, at least an allusion to question (3). It follows, that the intervening words must contain an answer to question (4). The phrase Ἀπόλλωνος πατρὸς καὶ Διὸς ἑρκείου γεννῆται is, I think, an impossible one. The sense requires εἴτα φράτερες <εἴτ'> Ἀπόλλωνος πατρὸς [εὐνοουόντες] καὶ Διὸς ἑρκείου γεννῆται? I think some such alteration is supported by the fact, that the order in which the two gods are usually mentioned is here inverted.

² This is quite evident from the passage. Anyone consulting it hastily might think that the conclusion was drawn from a mistaken interpretation of νόμος ὁ αὐτός (see Tarbell, p. 146 at the foot).

³ In this speech of Isaïos (27), γεννήτας should be substituted for συγγενεῖς. The συγγενεῖς had no register. It is impossible that the terms should be here used synonymously.

evidently, in the case of some phratries, the father's word on oath, and a compliance with the necessary ceremonies, was all that was required; there was no *διαψήφισις*. The law of the Demotionidai was still more stringent. Not only had the father's oath at the *εἰσαγωγή* to be supported by three witnesses, but the *διαψήφισις* or, as it is here called, *διαδικασία* took place a year after the sacrifice of the *κουρέιον*, so that the opposition had plenty of time to prepare their case. If we once recognize that the Demotionidai are *γεννήται*, and not *φράτερες*, there is nothing unintelligible in A, though there are many points in regard to which we desire further information. The term *ὁ Δεκελείων οἶκος* certainly awaits illustration. It is in so far synonymous with the phratry that the priest of Zeus Phratrios, who is elsewhere spoken of as *ὁ ἱερεὺς* simply, is, in line 41, called *ἱερεὺς τοῦ Δεκελείων οἴκου*, to distinguish him, probably, not so much from the priest of the Demotionidai, who, if he existed, was not a priest of Zeus Phratrios, as from the priest or priests of other phratries which were comprised in the Demotionidai, and whose members took part in the voting on this occasion.* A really difficult question is: Why is he alone, and not the phratriarch also, responsible for the fine? This is certainly significant and not fortuitous. An answer is demanded. I do not know if I am right in suggesting the following. The responsibility for the fine was a check on malpractices. The phratriarch is made responsible for the other fines because it was his duty to give the votes (*διδόναι τοὺς ψήφους*). In this case, it was not the phratriarch, but an officer of the Demotionidai, who put the question. No responsibility therefore attached to the phratriarch on this account. The priest is made responsible because he did influence the decision in so far as the appointment of the five *συνήγοροι*, no doubt, rested largely with him. The fact that the phratriarch is exempted shows that he had no voice in their appointment and that the *Δεκελείων οἶκος* was a religious not a civil body, representative of, or governing, this phratry.

The information which we derive from this inscription and the authorities I have mentioned is, that the *γεννήται* were a body more widely removed from the individual, and more authoritative than the *φράτερες*, and therefore presumably having several *φρατρίας* subject to them. There seems to me to be nothing in the texts, which have been quoted and requoted from the lexicographers, to disprove this.

* Töppler's statement contradicting this (*Attische Ges.*, p. 16 nt) is quite arbitrary, he does not give his reasons.

I do not wish here to undertake the difficult task of discussing these statements.⁵ I would only protest against Mr. Tarbell's identification of ὀργεῶνες and θιασῶται, which I think not justifiable, and against the apparently universal assumption, that in the passage of Philochoros, which he quotes (p. 148), the words τοὺς ὀργεῶνας κ. τ. λ. must be the object of the verb δέχεσθαι.

I have not been able to consult Szanto's article on this inscription. My only desire has been to point out that there has been too much theorizing in this matter and too little confession of ignorance, and that our only hope lies in adherence to the plain sense of inscribed texts.

W. R. PATON.

Aberdeen, Scotland.

P. S.—I have not attempted to discuss the question, whether all the φράτρες were, *ipso facto*, γεννήται. Those who take the view, that they were not, might thus explain the Δεκελείων οἶκος. The Demotionidai had several phratries subject to them: these phratries were localized in different demes or groups of demes: in each of these localities, the Demotionidai had a religious sub-centre which was called οἶκος. In this case, the priest of the Δεκελείων οἶκος is perhaps not the same as the priest of the phratry.

Schöll's essay, *Die Kleisthenische Phratrien* (*Sitzungsber. der Bayr. Ak.*, 1889, II) is very interesting. His explanation of the appeal is much the same as Mr. Tarbell's.

MR. TARBELL'S REPLY TO MR. PATON'S COMMENT.

The important point raised by Mr. Paton in the foregoing contribution concerns the relation of gens and phratry. That there was some sort of intimate connection between the two is abundantly evident. The question is, did the phratry include the gens, or was the phratry (or a part of it) included by the gens? Mr. Paton pronounces for the latter alternative. Apart from the inscription under discussion, the evidence for this view reduces itself, on examination, to the order in which the witnesses are called in Demosthenes LVII. The

⁵ No one should cite such authorities, without giving some account of their sources. American and English scholars shun *Quellen-Kritik* for a bad and a good reason. It introduces a new difficulty, it opens a new door for arbitrary conjecture.

force of this evidence appears to me to be weakened—I will not say destroyed—by two considerations. (1) The order of mention of the successive classes is not constant. In § 24 we have *συγγενῶν καὶ φρατέρων καὶ δημοτῶν καὶ γεννητῶν*, and *φράτερες συγγενέσι δημοταῖς γεννήταις*, both orders varying from the order of citation. (2) After the four classes enumerated, a fifth class are called to establish the same point (§ 28). These are those kinsmen who share with the speaker's family a common place of burial, and who are therefore his *γεννήταις*, or rather, as I think, a section of them (*cf.* § 67). The order of citation is therefore not an order of steady progression from narrower to wider bodies.

Of positive evidence against Mr. Paton's view I must own that I do not think there is much. But the fact that the names of phratries, so far as known, are gentile in form is not so easily reconcilable with the theory which divides a gens between several phratries as it is with the contrary theory.

I therefore "confess ignorance" on this subject. But I must protest, again, that *Isaios* VII. 16 does not prove that *φράτερες* and *γεννήταις* had the same laws. They had *one* law in common, requiring legitimacy of birth as a condition of membership. More than that cannot be inferred from the passage. Least of all can it be inferred that the gens had any authority over the phratry.

The following points are taken up in Mr. Paton's order. I touch only on such as affect my previous paper.

B-51. Nothing whatever is gained by treating the words *ὃν εἰσάγει ἐαυτῷ υἱόν* as parenthetical. The wording of the oath remains as ungrammatical as before. But Mr. Paton is quite right in correcting "his lawful son."

Mr. Paton's inference from *Isaios* III. 76 appears to me unwarrantable. The speaker is arguing that the father of a certain girl, by failing to present her for admission to his phratry, confessed her illegitimacy. This is treated in § 75 as a matter of course, and the implication, so far, is that the registration of daughters was the universal rule. In the next section he adds, *καὶ ταῦτα νόμου ὅντος αὐτοῖς* (*i. e., τοῖς φράτερσι τοῖς ἐκείνου*). I take this to be a somewhat superfluous insistence upon a well-known obligation, rather than an implication that the statutes of other phratries differed. This view receives confirmation from the language of *Isaios* III. 16, from which Mr. Paton infers that "not all phratries required the legitimacy of adopted sons to be

proved." But, as I pointed out in my article, the conditions of membership in a phratry were identical with the conditions of Athenian citizenship, and these were fixed by general Athenian law. Nothing is more likely than that different phratries differed in the strictness with which they administered the law, but that any phratry confessedly admitted illegitimate children, when adopted, is out of the question. In my view, the language of *Isaios* VIII. 18 (τοῖς φράτερσι γαμηλίαν εἰσήνεγκε κατὰ τοὺς ἐκείνων νόμους) should be disposed of in the same way. Reiske, whom Mr. Paton ought not to have appealed to, explains the passage differently. His note is: *unde colligitur, non omnibus phratris eodem ritus fuisse nuptiarum celebrandarum, sed cuique suos proprios.*

Finally, we have no evidence that the *thiasoi* "comprised only the immediate relatives of the applicant." And, in the case recorded in *Isaios* VI. 22, it was not "in the power of the applicant's only son to prohibit the εἰσαγωγή." The son protested and the phratry sustained his protest: οὐθ' ὁ υἱὸς αὐτῷ Φιλοκτήμων συνεχώρει οὐθ' οἱ φράτερες εἰσεδέξαντο, ἀλλ' ἀπηνέχθη τὸ κούρειον.

F. B. TARRELL.

ARCHÆOLOGICAL NEWS.

SUMMARY OF RECENT DISCOVERIES AND INVESTIGATIONS.

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GENERAL SUMMARY.

From **EGYPT**, owing to the decision of the Egypt Exploration Fund not to excavate during the past season, and to the transference of Mr. Petrie's activity to Palestine, there is nothing to report; but an interesting question is opened up in connection with some reliefs, now in the Louvre and British Museum, which were found at Abydos. M. Heuzey believes them to reveal the existence of an early Mesopotamian or Syrian school of sculpture dependent on Babylonian art, while Professor Sayce, and perhaps also M. Maspero, is of the opinion that they are examples of an Ethiopic school almost wholly independent of Egypt. In **PERSIA**, M. de Morgan is continuing his important excavations in early cemeteries, and the *Académie des Inscriptions* carries forward its good work by sending out M. Guiffrey, to study the early Christian monuments of the **ORIENT**, M. Bénédict, for inscriptions in the **SINAITIC PENINSULA**, and M. Dutreuil du Rhin, to explore in **CENTRAL ASIA**. The *Christian monuments of the ORIENT* are beginning to excite a little of the attention they deserve. MM. Ramsay and Bent have studied a number in Asia Minor: we have referred to M. Guiffrey's mission, and are pleased to add that a history of the ancient churches of the East, especially of Syria, Persia, and India, is being written by Rev. J. J. Nouri. There is a revived interest in the Holy Land. Both the German and the English societies for the exploration of **PALESTINE** are issuing maps that are far superior to anything yet published. Mr. Petrie's few weeks of excavation on the site of the ancient *Lachish* inaugurate a new era in our acquaintance with the arts and manufactures, the history, commerce and

cult of the early tribes of the land both before and during Hebrew dominion. Henceforth a criterion is established by which to date the remains of the ancient towns of Palestine.

The summer's harvest from **ASIA MINOR** is rich and varied. Mr. Bent's minute examination of the small tract of Kilikia Tracheiotis proved in its way as fruitful in discoveries—especially that of Olba—as Professor Ramsay's extended trip through Pisidia, Isauria and Kappadokia. The examination of the ruins of the Pisidian hill-fortress of *Adada* appears to have been, up to the present, Mr. Ramsay's most interesting single piece of investigation. MM. Schliemann and Dörpfeld have a most interesting report to make of their excavations at *Ilion = Troy*, the main object of which was to complete the plan of the city of the second or Homeric period. There is no doubt that their campaign has cleared up many doubtful points in the chronology of Troy and given a firmer basis for believing that the city lay at Hissarlik. The ramp leading up to the citadel, part of the Homeric royal palace, and some interesting early pottery, are the more prominent of the single discoveries. Austria shows her intention of continuing, under Prince Liechtenstein's patronage, the researches so auspiciously begun a few years ago.

From **KYPROS**, we learn of the successful termination of the excavations at *Salamis*. In **GREECE**, aside from the discovery of part of the royal palace in the acropolis of Mykenai, the main interest is centred in the sepulchral tumuli of *Attika*. Following up the phenomenal success at Vaphio, the Government continued excavations in the prehistoric tumulus at Bourba; in that of Belanideza, which contains tombs of the prehistoric, the archaic-Hellenic, and the Roman periods; and the Hellenic tumulus of Petreza. Tombs of the prehistoric period were found not far from Sparta, at Slavochori, near Argos, and at other places. All these discoveries are valuable for early-Greek civilization, but perhaps the most exciting of all is the discovery, in the mound called *Soros*, of the graves of the 192 Athenians, who fell at *Marathon*. The British School has closed its very successful season's excavations at *Megalopolis*, after having excavated the principal part of a pure Greek theatre of great size which settles the recent controversy in favor of those who held that the Greek actors were placed upon a stage raised above the chorus in the orchestra.

The study of the prehistoric antiquities of Italy has been of late stimulated by the contributions of Signor Orsi, who did excellent service in the archaeology of Northern Italy before he was transferred to **SICILY**. His latest contributions draw attention to two points: (1) a possible identity of date in the Italian civilization of the *terremare* and the Greek civilization of Mykenai; (2) the intimate relations between the early archaeology of Sicily and that of the Mykenian culture, proving the influence of the East on the West at that early period of the Pelasgic civilization.

In view of the great interest of the unique prehistoric monuments of Sicily, which Signor Orsi for the first time describes, it may be said that Sicily will take rank among the most important archæological fields. In ITALY, prehistoric investigations have been carried on at *Brembate Sotto* and *Fontanella*, as well as in *Sardinia* where several tombs and caves of the "giants" have been found. From *Arezzo* comes the news of the discovery of a potter's establishment conducted on the coöperative system by Greek artisans from Southern Italy. Some remarkable frescoes have come to light at *Pompeii*, and at *Rome* the arrangement of the banks of the Tiber at the time of Augustus has been partially ascertained by finding *in situ* a number of terminal posts (*cippi*). The only important piece of sculpture discovered appears to be a fine archaic metope of one of the temples of *Selinous*. Finally, an inscription found at *Florence*, furnishes the first epigraphic evidence that *Florentia* was a Roman colony.

SPAIN, thanks to M. Heuzey, appears as the centre of a school of archaic sculpture in which early Greek art has reacted upon the Phœnicians, in one of whose Spanish colonies these interesting works may have been produced.

ORIENT.

EXPLORATION OF CHRISTIAN ANTIQUITIES.—M. JULES GUIFFREY, Archivist of the National Archives, is charged with a mission in the East (Turkey, Greece, Syria, and Egypt) with the object of studying the earliest monuments of Christian civilization.—*Chron. des Arts*, 1890, No. 24.

A comprehensive history of the ancient Christian churches still existing in Syria, Persia, and India has at length been undertaken by a dignitary of that Romanized branch of the Nestorian Church known as the Chaldean Church. The author, the Rev. J. J. Nouri, who is Archdeacon of Babylon, has been spending some weeks in Southern India, visiting the centres of both the Uniat and the Jacobite Syrian churches in Travancore, Bangalore, etc., and making copious extracts from records in those seats of early Indian Christianity, some of which are said to date back to the fifth century. One portion of the Archdeacon's work is to comprise a complete series of annals of the Chaldean race from the most ancient to the most modern times.—*Athenæum*, July 12.

ORIENTAL CERAMICS.—MR. HENRY WALLIS, R.W.S., is still busily engaged in contributing to our knowledge of early Eastern and Moslem Pottery. Having exhausted, in his *Early Persian Ceramic Art*, nearly if not all the known specimens of Persian pottery which may fairly be attributed to dates anterior to the thirteenth century, he is now engaged upon a larger work, illustrated like its forerunners with careful drawings by himself. This will deal with a notable collection hitherto unknown, and with the history of Persian lustreware. Pending the arrangements neces-

sary to complete this work for publication, he is preparing a monograph upon Persian art since the Sassanian period. This will be mainly devoted to that almost-unknown class of pottery more or less influenced by Byzantine motives, of which he has been fortunate enough to secure some examples from the East. Specimens of contemporary pottery from Egypt and Asia Minor, some found by himself, others from the British Museum and the excavations of Count d'Hulst at Cairo last winter, will also be illustrated and commented upon.—*Academy*, Aug. 9.

EGYPT.

ETHIOPIO OR ASIATIC RELIEFS IN THE LOUVRE AND THE BRITISH MUSEUM.—

Two articles by M. HEUZÉY in the *Revue archéologique* have called attention to some very remarkable reliefs, of which one is in the Louvre, another at least in private hands, and three are in the British Museum.

In the *Rev. arch.*, 1890, 1, pp. 145-52, M. Heuzéy describes the relief in the Louvre. It must have formed part of an oblong platter of hard schist, of dark green color; in the centre of which was left a large circular rim with raised edges. There remains over a third part, on which is a series of figures in very low relief representing a band of warriors marching, and, in the field, several animals. In the figures, the Asiatic character of the types is very striking: the only garment is a short skirt in vertical folds held by a heavy plated belt from which hangs a jackal-skin and tail, an emblem of honor. The arms are especially curious and varied. Some warriors brandish in their right hand a mace terminating in a spherical mass probably of stone, similar to the national arm of Babylonia and Assyria. Others raise such weapons as harpoons, boomerangs, and perhaps an axe with curved handle and triangular edge. In their left they hold a lance or, more generally, a bow. One holds in his right a bundle of cutting-arrows, which ended not in a point but in a blade of stone-agate or silix. The subject seems to be a hunting-scene, for a hare and two gazelles are seen, given in the vigorous style of Chaldeo-Assyrian art. There are striking analogies to the paintings of the XII dynasty at Beni-Hassan, and this leads M. Heuzéy to select quite an early date for this relief: "The warriors are not properly Chaldeans or Assyrians; but the work and style point to a group of populations placed quite early under the influence of Chaldean culture, like those that established themselves between the Euphrates, the coast of Syria, and the Red Sea."

A letter by M. MASPERO on this relief is published in the *Rev. arch.*, 1890, 1, pp. 334-7, accompanied by M. HEUZÉY's further comments. M. Maspero says, that he saw, in Egypt, this relief as well as another of the same style and material, now in a private collection. It was said to come from Saqqarah or Abydos, and was offered to him in company with several

small objects found in the Aramaic and Persian necropolis of Saqqarah, among which were a cylinder of Egyptian style with a cuneiform inscription, and a checker in artificial *lapis-lazuli* bearing four Aramaic letters. The relief belongs apparently to a table for offerings and, in M. Maspero's opinion, had two rims and consequently two concentric bands of reliefs forming one procession. In the technique of the hair, in the skirt, in the animal-skin, and in the arms, M. Maspero discovers a purely Egyptian character. The two standards are Egyptian, one the flag of the West, the other of the East; so also are the animals. In the opinion of M. the style of workmanship is also Egyptian, of the ruder type, by an unskilled artist. However, in his opinion, it may be a Libyan or possibly Asiatic work, but in any case under direct Egyptian influence. At all events, the tribe represented on the relief, whether it be Libyan or Asiatic, is marching under Egyptian standards, and is therefore an ally not an enemy. M. Heuzey, notwithstanding M. Maspero's remarks, keeps to his theory, that the warriors are Syrians.

Three other reliefs belonging to the same class have found their way to the British Museum. They are not published, as that of the Louvre has been—in a good heliotype—but are merely described, as follows, by E. A. W. BUDGE, in the *Classical Review* (July, 1890, pp. 322-3): "Some years ago the Trustees of the British Museum acquired three pieces of green schist with sculptures of a similar nature, and among them is the large fragment of which that described by M. Heuzey forms a completing portion.

"No. 20791. Rectangular fragment $11 \times 7\frac{1}{2}$ ins., on which is represented in relief a scene after a battle. A number of woolly-headed, bearded, circumcized men are lying dead or dying on the ground; one of these has his arms tied together above the elbows. In the upper part of the scene is a lion, one of whose paws is firmly planted on the leg and another on the arm of one of these prostrate figures. In the lower part of the scene a number of vultures and carrion-crows are picking out the eyes of the dead (who are naked) and devouring their flesh. Above, to the right, are two figures, the heads and shoulders of which are wanting; one is an officer or overseer, and the other a captive with arms tied together behind him, and a heavy weight suspended from his neck. On the back of this fragment is part of a scene in which two giraffes are cropping the leaves of a palm-tree.

"No. 20790. Fragment of irregular shape, 12×6 ins., which joins that published by M. Heuzey. On it are represented in relief (1) a house with a domed roof and two towers, on the left hand is the door; a bull with two heads, one of which faces to the right, the other to the left: (2) a lion followed by a lioness, rushing on to seize a hunter who is armed with a bow and another weapon; head of the lion is transfixd with two arrows, as appears

from the Louvre fragment: (3) behind the lions are two hunters, both wearing feathers on their heads. The first carries a double-bladed axe in the right hand and, in the left, a sceptre on the top of which is a bird (eagle?); over his shoulder hangs a bag. Each man wears a short tunic, with folds, fastened around his waist, from which hangs a tail. The second hunter draws toward him a gazelle which he has caught with a lasso. Close by runs a dog or jackal.

"No. 20792. Fragment of irregular shape; its greatest measurements being $14 \times 8\frac{1}{2}$ ins. It appears to join the Louvre fragment, and, together with the British-Museum fragment No. 20790, to have formed part of the libation(?) slab of which very little is now missing. This fragment proves beyond all doubt that a hunting-scene is represented. The first hunter holds part of the rope which has been used to lasso the gazelle; the second is armed with a spear and a boomerang; the third with a bow and a double-bladed hatchet; and the fourth with two spears and a boomerang. Each man wears feathers, a tunic, and a tail. Beneath this row of figures are an oryx, an ostrich, an oryx, a stag (?) with branching antlers, and an animal like a jackal, the tail of which is very much like that hanging from the waist behind each man. At the tapering end of this fragment is a lion, the head of which is transfixed with five arrows; an arrow shot well into one of his thighs makes him lash his tail. The three hunters on the other side of the animals are armed and dressed like their companions; each, however, carries a bag (?) apparently slung over his shoulder.

"These fragments though found in Egypt are not of Egyptian workmanship, and were brought thither from some foreign Eastern land either as gifts or articles of tribute. The lions are like those on the Assyrian sculptures, the birds are identical with those found on the Babylonian landmarks, and the features of the men are Shemitic. They were most probably made by Mesopotamian sculptors about 1550 B. C., and sent by his Mesopotamian allies to Amenophis III, to whom, on account of the lion-hunting expeditions sculptured on them, they would be an acceptable gift."

A. H. SAYCE writes to the *Academy* (of Aug. 9): "Since I wrote on this subject in the *Academy* of July 26, I have read Mr. Budge's article in the *Classical Review*, and see that it contains evidence against his conjecture that the slabs which he describes came from Mesopotamia. One of them, he states, has upon it the representation of two giraffes browsing on a palm-tree. Now the giraffe has been confined to the Ethiopian region of the world during the historical period, and was consequently unknown to the inhabitants of Asia. The stones, therefore, on which it is depicted could not have come from Mesopotamia, but must have been brought from the districts of the Soudan south of Egypt. The dress of the huntsmen represented on the slabs bears out this conclusion. It is the same as that of

the people of Kesh or Kush whose portraits are met with on the Egyptian monuments. The feathered head-dress worn by Asiatics like the Zakkur or Merodach-nadin-akhi of Babylonia is quite different, consisting of a fringe of feathers which runs round the top of a square cap. On the other hand, the one or two tall feathers stuck in the hair of the huntsmen on the slabs exactly resemble the mode in which, according to the Egyptian artists, certain Kushites and Libyans decorated their heads. We must, accordingly, see in the slabs an example of early Kushite or Ethiopian art. The sculptors probably belonged to the same race as the prehistoric people who have covered the sandstone rocks of Upper Egypt with their rude designs. Here, too, we have figures of huntsmen armed with bows and arrows, of giraffes, ostriches, and other animals, in the same style of art as that of the slabs. Both Mr. Petrie and myself have pointed out the evidence there is for the great antiquity of these drawings, which imply that, at the time they were made, the district south of Sileilia was a well-wooded and, therefore, well-watered land, where herds of giraffes browsed on the foliage of the shrubs—a physical condition of the country very unlike that which has prevailed there in historical times. Similar prehistoric drawings on the rocks have been found in various parts of northern Africa, in southern Morocco by Lenz (*Timbuktu*, II, pp. 10, 367), in the district between Tripoli and Ghadames by Rohlf (*Quer durch Afrika*, I, p. 52), in the country of the Tibbu by Nachtigal (*Sahara und Sudan*, I, p. 307) and in Kordofan by Lejean (Hartmann, *Nigritier*, I, p. 41). Dr. Bonnet has recently discovered them in southern Oran, along with the stone implements by means of which they were engraved (*Revue d'Ethnographie*, VIII). As I have before remarked in the *Academy* (March 15, 1890), they remind us of the Bushman paintings on the rocks of southern Africa. I may add that the museum of Constantinople contains some curious sculptured stones from Darfur which in many points present a strong resemblance to those which are the subject of this letter."

THE BENI-HASSAN CARTOUCHES.—Mr. C. Murch writes from Ramleh (Egypt) under date of July 29: "Soon after the mutilation of the celebrated Khnum Hotep tomb at Beni-Hassan became known, it was suggested that, if the cartouches could be found, it would be worth while to replace them in their former positions in the tomb. On January 24, I learned that two cartouches I had purchased from a native dealer belonged to those that had been stolen from the Beni-Hassan tomb; and I hastened, on the same day, to acquaint the Egyptian government with the fact, at the same time accompanying my statement by the following words: 'I am ready to tell you at any time the facts as to where I got the pieces. I feel satisfied that with this information you will be able to work back to the guilty parties.' I supposed that the authorities would hasten to ask me

where and from whom I purchased the pieces. In this I was mistaken. Some days later I had an opportunity of seeing the dealer from whom I made the purchase, and I succeeded in getting a third cartouche. On February 25, I informed the Egyptian government of this third cartouche; but to this day the authorities have never asked me anything about where I got either the first two or the third of the cartouches.

"The Egyptian government will never be able to offer a reasonable excuse for having permitted conditions to exist which admitted of the possibility of such wholesale destruction of tombs as was carried on during the summer and fall of 1889 within a radius of fifteen miles, including Beni-Hassan. I saw myself scarcely less than one hundred of these pieces.

"The man from whom I purchased the cartouches has told me, repeatedly, that he sold to the Bulâq Museum thirty-eight or thirty-nine pieces, every one of which came from the neighborhood of either Beni-Hassan or Tel-el-Amarna.

"Some time ago the Egyptian authorities, through the American Consul-General, requested me to return the cartouches I had purchased, as they had been stolen from the tomb. I proposed to return the cartouches on the condition that the government should make a vigorous effort to recover the remaining cartouches; that they should agree to restore the cartouches to their places in the tomb; and that the tomb should be thoroughly secured against further depredations by a strong iron door. In reply to a further unconditional offer, I am told that the Archaeological Department will be very glad to get them, and that it may be possible to replace them in their former position; but no positive agreement to do so is made, nor is any intimation given that any effort will ever be undertaken to secure the remaining cartouches or discover the perpetrators of the deed."

"JOSEPH IN EGYPT."—Under this title, Dr. H. BRUGSCH contributes an article to the *Deutsche Rundschau* for May. At its close, Dr. Brugsch announces the discovery of an inscribed stone found last winter by an American, Mr. Charles E. Wilbour. The tablet contains 32 lines, more or less defaced. At its head is the name and title of a hitherto unknown king, *Chit-het*, who, in the fourteenth year of his reign, speaks of "the very great misfortune of having no overflow of the Nile for seven years." Certain peculiarities in the style of writing and in the grouping of hieroglyphs assign this stone to the fourth century B. C. Evidently somebody had taken an old story of a seven-years' famine, and clothed it in modern dress for the purpose of exciting respect for some fourth-century divinity. In the reign of this ancient king, the seven years of famine had closed with the fourteenth year of his reign. The seven "fat years" had preceded them. The throne-name of this king, different from his family name, has

been found once on an inscription over a door in the great pyramid of Saqqarah, from which it appears that the king belonged to the first Egyptian dynasty, at least 1500 years before the time of Joseph. This old story, with the name of the old king, was again circulated in the XXII dynasty. Dr. Brugsch believes in the real historic character of this newly-found stone, and calls Chit-het "the longest forgotten king of any epoch;" and he says that the stone will be prized through all time as an important piece of evidence for the actual occurrence of a seven-years' famine in the time of Joseph.—L. DICKERMANN, in *Zion's Herald*.

CAIRO.—FRENCH SCHOOL.—The work of the French School of Archaeology at Cairo progresses apace. It is the self-imposed law of this studious and learned body, that each member of the school shall annually make a full and complete copy of some one monument of ancient Egypt, small or large, temple or tomb. In certain cases, where the task is too great for the limit of time, two or more years may be devoted to it. The school proposes this year to attack the multitudinous texts of the Great Temple of Edfû—a gigantic undertaking, and one which will surely give employment to more than one student for at least some years. In the meanwhile, M. Bénédite has transcribed all the texts and copied all the bas-reliefs at Philæ, and it is hoped that his *Mémoire* may be ready for publication in 1892. M. Bouriant is progressing fast with Médinet Habû, where he has been at work for the last two years. The forthcoming numbers of the *Mémoires* of the school will contain, *inter alia*, the end of M. Ravaisse's monograph on the old palace of the Fatimite Kaliphs at Cairo, some important Coptic texts, and transcripts of several historic tombs at Thebes, including that of Queen Titi, with illustrations in chromolithography.

MENDES.—DISCOVERY OF A PTOLEMAIC LIBRARY OF PAPYRI.—A discovery has been made on the site of the ancient Mendes which may be of more than mere Egyptologic importance. A building has been partly unearthed, consisting of some fourteen rooms containing what was apparently a library of the Ptolemaic period. More than five hundred rolls of papyrus have been found in a carbonized condition, the building having evidently been burned. These papyri are written in Greek, and, so far as can be seen, are of the Ptolemaic or Roman age, and not Byzantine. There is a chance, therefore, of finding some works of value. But it will be necessary to spend several hundred pounds in excavation, and the Museum is just now without funds. Then comes the slow work of unrolling and deciphering, for which it will be necessary to employ one of the experts at Naples.—N. Y. *E. Post*, July 7; *Cour. de l'Art*, 1890, No. 27.

THEBES.—From Thebes there comes intelligence of the discovery, this spring, of a headless statue of Seti II of heroic size and archaic style. It was found at a depth of two feet below the surface level of the mud

deposit which covers the floor of the great Hypostyle Hall. Greeks and Europeans, meanwhile, are carrying on an extensive system of plunder at Ekhnim and other places.—AMELIA B. EDWARDS, in *Academy*, July 26.

ALGERIA.

CHERCHELL.—A CHRISTIAN SARCOPHAGUS-RELIEF.—To the west of Cherchell, opposite the present cemetery, two Roman wells and two sepulchral chambers were found last year, containing a large number of stone sarcophagi. Among other contents that escaped destruction was the front of the cover of a Christian sarcophagus of the fourth or fifth century. It is covered with figures in relief. In the centre is an unfinished circular medallion supported by two genii. On the left is the Adoration of the Magi accompanied by their camels, while Joseph rests on the back of the Virgin's chair. On the right are the three children in the fiery furnace.—*Revue arch.*, 1890, i, pp. 214-16.

ASIA.

HINDUSTAN.

INDO-SASSANIAN COINS.—Recent numbers of the *Proceedings* of the Asiatic Society of Bengal contain reports on old coins, acquired by the government as treasure-trove, by Dr. Hoernle, the philological secretary. The most important find here recorded is that of 175 silver pieces of the class called Indo-Sassanian, which were discovered in Marwara. According to Dr. Hoernle, they resemble the genuine Sassanian type more closely than any hitherto known. They belong to two series: one imitating the coins of the Sassanian king Firuz (459-86 A. D.) in minute details, though of rude execution; the other substituting a barbaric head for that of Firuz. On none is there any legend. It is known from history that about 470 A. D. the White Huns, under their leader Toramana, annexed the eastern provinces of the Sassanian kingdom, and passed on to the invasion of India. It is further known that Toramana imitated the contemporary Gupta coinage, as well as that of Kashmir, putting his name on them. Dr. Hoernle, therefore, argues that these Indo-Sassanian coins also belong to Toramana, at an earlier period of his conquests. In this connection it is interesting to note that the barbaric head with its thick lips and large nose is not unlike that on the gold coins of the Indo-Scythian king Kadphises.—*Academy*, June 14.

INDIAN PHILOLOGY.—*Part IV of Epigraphia Indica*—the official record of the inscriptions collected in the course of the Archaeological Survey of India—consists, like former parts, of texts and translations which have

been prepared by German scholars from the impressions made by Dr. James Burgess and his assistants. Perhaps the most important paper is that by Prof. Kielhorn, of Göttingen, upon the Siyadoni inscription, which has enabled him to reconstruct the order of four kings of Kannauj in the ninth and tenth centuries. This inscription records the gifts of traders to Vishnu; and many of the gifts are valued in terms of *drammas*, which is evidently a coin or monetary denomination of some sort. Another inscription, from Peheva in the Karnal district of the Punjab—edited by Prof. Bühler, of Vienna—similarly records the voluntary taxation for religious purposes imposed upon themselves by certain horse-dealers.—*Academy*, June 21.

AFGHANISTAN.

GRÆCO-INDIAN STATUES.—M. Sémart has published, in the *Journal Asiatique* (1890, Feb.-March), a paper in which he describes very fully the remarkable sculptures found at Sikri and already referred to on p. 179 of this volume. His paper is accompanied by good plates. A full summary of it will be found in our summary of the *Journal Asiatique*.

PERSIA.

EXCAVATIONS BY M. DE MORGAN.—The excavations undertaken by M. de Morgan at the request of the Ministry of Public Instruction in Linkoran (Northern Persia, on the banks of the Caspian) have been eminently successful. His encampment has been at an elevation of 1745 met. at Aspa Hiz, six kilom. from the frontier. He has found a large number of dolmens, which, instead of containing, like those of Scandinavian lands, sepulchral furniture of polished stone, belong, on the contrary, to the bronze or the iron age. The country appears to have been unoccupied when these dolmen-builders (which he believes to have been Aryans) established themselves in it: the stone age is unknown in the province of Linkoran. M. de Morgan has collected more than 1300 objects from about 200 tombs. The collection is on its way to Paris.—*Cour. de l'Art*, 1890, Nos. 27, 30.

CENTRAL ASIA.

The *Académie des Inscriptions* has allotted 15,000 frs., from the Garnier Fund, to M. Dutreuil du Rhin, who is charged with a mission of exploration in Central Asia.

BABYLONIA.

A COLLECTION OF BABYLONIAN TABLETS.—A very interesting collection of clay-tablets found in the ruins of Sippara was sold by Messrs. Sotheby and Co. on July 4. The catalogue contains about two hundred and fifty lots, the majority dating from the early period of the First Babylonian Empire. These are generally contracts for the sale of lands, fields, houses,

grain, slaves, etc., and attest the great commercial activity of the metropolis of the rising empire. A marriage contract of the time of Khammurabi (No. 217) claims special attention, as it is unique among the documents of this epoch. The remainder of the collection consists of tablets of the Second Babylonian Empire, and of the Persian, Greek, and Parthian periods. Two are especially interesting from the social point of view. One is the summing up and judgment in a lawsuit of the thirteenth year of Nabonidos. A farmer named Iddin-Marduk had sent by boat to Babylon 480 measures of fruit. Kurgal-natan, who had undertaken the transport, lost part of his cargo on the way, and, having admitted that there had been neglect on his part, agreed to make restitution. When Iddin-Marduk came to claim the amount, Kurgal-natan avoided him, so that the former was compelled to bring the case before the court. The boat-owner, when summoned, acknowledged the charge, and was condemned to pay the value of the lost fruit. The decision is attested by the seals of five judges. This curious case shows that, in Babylonia, carriage practically included insurance. There are a great many contracts of sales and loans. An interesting one (No. 205) shows that slaves as well as lands, houses, and personal property were mortgaged. It also comprises lists of various kinds of tithes due to the temple of Esagil, of animals brought to Babylon for sale, and of other personal property. No doubt it was an inventory made before a mortgage, or a bill of sale.

The tablets of the Greek and Parthian periods are, as usual, mostly astronomical. The latest is of 91 A. C. The collection also includes a few Akkadian texts. The most important (No. 215) consists of 216 lines, and appears to be agricultural.—*Academy*, June 21.

TABLETS FROM NIFFER.—Professor Robert Harper of Yale College brought back from the University of Pennsylvania's expedition to Babylonia three tablets. They belong to the so-called class of loan-tablets, and were unearthed at Niffer. They are dated in the years two and four of Ashur-itilli-ilani, King of Assyria. The dates are of chronological value. They show that the Babylonian empire existed, if only in name, for four years after the death of Assurbanipal.—*Biblia*, Sept., 1890.

ARABIA.

MISSION TO MT. SINAI.—Marquis de Vogüé communicated to the *Académie des Inscriptions* a letter from M. Bénédict, whose epigraphic researches in the Sinaitic peninsula have already been partially reported (vol. v, pp. 88, 486). It is dated from the wady Feiran, May 17, 1890. M. Bénédict has copied more than a thousand inscriptions between the wady Nasb, the region of Magharat, the Mogatteb and the Feiran wadys. The

explorer believes that the region which he is now about to explore will not prove as fruitful.—*Paris Temps*, June 14.

PALESTINE.

NEW MAPS OF PALESTINE.—Dr. HANS FISCHER of Leipzig assisted by Prof. H. GUTHE has executed a fine new map of Palestine which is published, accompanied by an explanatory article of Dr. Fischer, in the *Zeitschrift d. deut. Palästina-Vereins*, XIII (1890), 1. Dr. Fischer remarks: "The geographic and especially the topographic exploration of Palestine has made extraordinary progress during the last decades. But this has not been made use of cartographically in the way required by the present condition of geography. The above new map of Palestina, on a scale of 1:700000 (pl. 2) is planned to meet this want, and we have considered our main problem to be, to give a clear and correct statement of the orohydrographic relations of this region. The nomenclature and especially the historical names are due to Professor H. Guthe." The most important source for this map was the great map published in 1880 by the English Palestine Exploration Fund, on the scale of 1:63360, in 26 sheets. Help has also been derived from Captain Conder's survey of a portion of Eastern Palestine in 1881; from Mr. Schumacher's survey of Deholan, West Hauran, Ad-schlun, etc.; from Lieut. Mantell's maps of the coast of Syria; and from the maps of the French Expedition of 1860-1. A further list of sources is given by Dr. Fischer, involving an historic account of the successive investigations in the various provinces included in this map.

The Palestine Exploration Fund has now ready for issue the new map of Palestine, upon which Mr. GEORGE ARMSTRONG, the assistant secretary, has long been engaged. It is on the scale of three-eighths of an inch to the mile; and it takes in both sides of the Jordan, extending to Baalbek and Damascus in the north, and to Kadesh Barnea in the south. All modern names are in black; over these are printed Old-Testament and Apocrypha names in red, and New-Testament, Josephus, and Talmudic names in blue, thus showing at a glance all the identifications of sites that have been ascertained. A companion map, showing the elevations by raised contour-lines, is also approaching completion.—*Academy*, Aug. 2.

AN EARLY HEBREW INSCRIPTION.—Prof. SAYCE has communicated to me the following inscription on a small weight found on the site of Samaria, and purchased by Dr. Chaplin last spring: face 1. רבע של; face 2, רבענננ; which seems to read רבע של רבע נננ, "a quarter of a quarter of a נננ." Mr. Flinders Petrie, to whom Prof. Sayce communicated this interpretation, writes that he has discovered, from other sources, that the standard weight of Northern Syria amounted to 640 grains, of which the quarter of a quarter would be 40 grains, that is, exactly the value of the

Samaritan weight in the possession of Dr. Chaplin. Whether נצנ is derived from the root צנ cannot be decided yet, but the use of ש is important at the probable date of the eighth century B. C., which the forms of the characters indicate, and in the northern kingdom. ש, which is a contraction of ש = ל אשר, is found in *Canticles*, which is considered a production of the Samaritan kingdom, in *Jonah*, and in *Ecclesiastes*. The early use of ש might perhaps help to bridge over the gulf which Prof. Margoliouth has found between classical Hebrew and that of Sirach. —A. NEUBAUER, in *Athenæum*, Aug. 2.

HEBREW INSCRIPTIONS OF THE PRE-EXILIO EPOCH.—A fixed starting-point in date can at last be assigned to the few pre-exilic Hebrew inscriptions which are at present known to us. Mr. Clark, of Jerusalem, possesses a seal which bears upon it the following inscription: לְאִישׁמָעֵל בֶּן־מֶלֶךְ; "Belonging to Elishama' the son of the king." Now this Elishama' is evidently the Jewish prince who is mentioned, in *Jer.* xli. 1, as of "the seed royal" and grandfather of Ishmael, the contemporary of Zedekiah. He would, therefore, have flourished about 650 B. C., and the forms of the characters used in his inscription become a subject of epigraphic interest. Three of them are specially distinctive—*Aleph*, *Mēm*, and *Kaph*. Of these, *Aleph* and *Mēm* have precisely the same forms as in the Siloam inscription. On the other hand, the *Kaph* is less archaic than in the Siloam text. The latter must consequently be somewhat older than the seal of Elishama'; and the general opinion is thus justified which refers the tunnel and inscription of Siloam to the reign of either Ahaz or Hezekiah.—A. H. SAYCE, in *Academy*, Aug. 2.

CAESAREA (near).—VESPASIAN'S COLONY OF CAESAREA.—A letter from Dr. SCHUMACHER dated from Haifa to Professor Guthe gives information of the discovery, six kilom. S. W. of Caesarea, of ruins of buildings, and of a granite column with an inscription reading: M(arcum) FL(avium) AGRIPPA M PONTIF(icem) | II VIRAL(em) | COL(oniae) I (primae) FL(aviae) AUG(ustae) CAESARAE ORA(TO)REM EX DEC(urionum) DEC(reto) PEC(unia) PUB(lica). The letters are in the form that would be given by the reed or brush as used in judicial acts. It is important as the first inscription found on this site, and certainly the first in which the full name of this colony of Vespasian is given, which was, as Tacitus says, *Caesarea Judaeae caput*, the capital city both for native kings and Roman governors. Many coins, from Domitian down, bear the name of the city. The Roman colony was placed here very shortly after the end of the Jewish war. Its title of first colony, *colonia prima*, shows it to have been the first colony in the Roman Empire founded by Vespasian. The site where the inscription was found is interesting as showing that the territory of the colony extended as far as this point. The Agrippa mentioned in the inscription is conjectured to be the

son of Josephus, and the date to be before 100 A. D.—Prof. ZANGEMEISTER, in the *Zeitschrift d. deut. Palästina-Vereins*, XIII (1890), 1, pp. 25–30.

LACHISH.—FLINDERS PETRIE'S EXCAVATIONS.—We take, from the annual report of the general committee of the Palestine Exploration Fund, the following account by Mr. Petrie of his recent excavations on the site of Lachish.

After lengthy delays, officially, I was able to begin excavation for the Palestine Exploration Fund in the middle of April. Nothing was known of the history of pottery in Syria, and therefore nothing had been done in past surveys and explorations towards dating the various *tells* and *khurbes*. It had been necessary, therefore, on applying for a site to trust to the identification by names; and there seemed little risk in expecting that Umm Lâkis and 'Ajlân—one or other, if not both—would prove to be Amorite towns, Lachish and Eglon. Some other ruins were included in the legal limit of area of 9½ square kilometres for the permission. Among them, most happily, was Tell Hesý. I left Egypt for Syria, arriving at Jaffa on March 9. Although the permission was signed, it did not reach Jerusalem till March 29. For nearly three weeks, therefore, I was unable to forward the business. Meantime I was able to examine and discuss the various buildings and remains of masonry with Professor Hayter Lewis and Dr. Chaplin; and thus I learnt something about the antiquities, but I found how provokingly little is positively known and in what a vast uncertainty almost every question still remains. It was not until April 14 that I could begin work. I had already visited the various sites included in the area of permission, but found that all but one were of Roman age and unimportant. The only prominent place was Tell Hesý, in the Arab country, six miles from the village of Burer, where we had to settle to begin with. But as Umm Lâkis had been supposed to be Lachish, and it was the nearest site to the village, three miles off, I determined to examine it. My expectations of it were quite confirmed. We trenched about all over the ground down to the undisturbed native red clay; but there were only six or eight feet of earth, and pottery of Roman age was continually found in it; while, most decisively, a worn coin of Maximian Hercules (circa 300 A. D.) was found within two feet of native clay. Khurbet 'Ajlân appeared far less promising than Umm Lâkis; there is very little extent of artificial soil, very little pottery about it, and what there is shows Roman age.

We then moved and established ourselves at Tell Hesý, which appeared to me to be a very important city of early date. We will first notice what reasons there are for believing this to be Lachish, and then we shall see how valuable the literary notices of its history become in understanding the site. Lachish was one of the five strongholds of the Amorites, with Jerusalem, Hebron, Jarmuth and Eglon (*Jos. x. 5*). And it continued to be one of the strongest places in the country down to the invasions of Sen-

nacherib and Nebuchadnezzar, to both of whom it was a special object of attack. It must, therefore, have had some natural advantages, and from various other notices (especially Eusebius) it certainly lay in the low country in this district. Now at Tell Hesi is the only spring for miles around, a brackish brook trickles down from Tell Nejileh, where in ancient times it was confined by a massive dam; and at Tell Hesi it is joined by a fine fresh spring, while the whole of the water is swallowed in the stony wady within a few hundred yards lower, and never reappears. It is certain, then, that Tell Hesi and subordinately Tell Nejileh must have been positions of first-rate importance from the time of the earliest settlements. They would thus agree to the character of Lachish and Eglon. The history of Tell Hesi begins about 1500 B. C., and ends about 500 B. C.; while Tell Nejileh, as far as can be seen on the surface, is of the same age, or ruined even earlier. The absolute point of date is the position in Tell Hesi—at half to three-quarters of the height up the mound—of the thin black Phœnician pottery which is known in Egypt to date from about 1100 B. C. While the close of its history is fixed by the fragments of good Greek pottery on the top of it, and the total absence of Seleucidan and Roman objects. There are then no sites in the country around so suited to the importance of Lachish and Eglon as these two Tells; and conversely there are no recorded places of such primary value as these must have been, except the two Amorite capitals of the low country, which we know to have been near together. The transference of the names in late times to settlements a few miles off is probably due to the returning Jews not being strong enough to wrest the springs from the Bedawin sheep-masters.

The actual remains of Tell Hesi consist of a mound which is formed of successive towns, one on the ruins of another, and an enclosure taking in an area to the south and west of it. This enclosure is nearly a quarter of a mile across in each direction, and is bounded by a clay rampart still seven feet high in parts, and in one place by a brick wall. This area of about 30 acres would suffice to take in a large quantity of cattle in case of a sudden invasion; and such was probably its purpose, as no buildings are found in it, and there is but little depth of soil. The city mound is about 200 feet square; its natural ground is 45 to 58 feet above the stream in the wady below, and on that the mass of dust and ruins of brick walls rises 60 feet. The whole of the east side of the town is destroyed by the encroachments of the valley, which here makes a great bend that has enabled the winter torrents to eat away this side. But for this fact we should have been unable to reach anything much of the earlier ages here; but in the section cut away in a steep slope above the wady every period is equally exposed. We can thus see the succession of the walls of the town and trace its history.

The earliest town here, on a knoll close to the spring, was of great strength and importance; the lowest wall of all being 28 feet 8 inches thick, of clay bricks, unburnt; and over this are two successive patchings of later rebuilding, altogether 21 feet of height remaining. Such massive work was certainly not that of the oppressed Israelites during the time of the Judges; it cannot be as late as the Kings, since the pottery of about 1100 B. C. is found above its level. It must, therefore, be the Amorite city; and agrees with the account that "the cities are walled and very great" (*Num.*, xiii. 28), "great and walled up to heaven" (*Deut.*, i. 28), and also with the sculpture of the conquests of Ramessu II, at Karnak, where the Amorite cities are all massively fortified. So far as a scale of accumulation can be estimated, the foundation of the city wall would have been about 1500 B. C., and thus agrees to the time of the great Egyptian conquests of the land, beginning under Tahutmes I, at that date. The need of a defence against such a well-organized foe probably gave the great start to fortifying in Syria. On both outside and inside of this wall is a great quantity of burnt dust and ashes, with fragments of pottery; and we can now exactly know the character of the Amorite pottery.

This fort, after repairs which still exist as solid brickwork over 20 feet high, fell into complete ruin. No more bricks were made; rude houses of stones from the stream were all that were erected; and for long years the alkali burner used the deserted hill, attracted by the water-supply to wash his ashes with. This corresponds to the barbaric Hebrew period under the Judges. This period is marked by a stratum of 5 feet of dust and rolled stones out of the valley below, lying in confusion on the ruins of the great Amorite wall. These remains clearly show a barbaric period, when rude huts of the nearest materials were piled up only to fall soon into ruin. Then, again, the town was walled. Phœnician pottery begins to appear, and some good masonry—evidently of the age of the early Jewish kings. This period of wall-building and fortifying goes on with intermissions and various destructions until the end of the history. Successive fortifications were built as the ruins rose higher and the older walls were destroyed; Cypriote influence comes in, and later on Greek influence, from about 700 B. C. and onwards. The great ruin of the town was that by Nebuchadnezzar, in about 600 B. C.; and some slight remains of Greek pottery, down to about 400 B. C., show the last stage of its history. Happily the indications can be interpreted by our literary records, otherwise we could have discovered little about a place in which not a single inscription or dated object has been found. The first of these walls is the most solid, being 13 feet thick, and this probably belongs to Rehoboam's fortification of Lachish (*II Chron.*, xi. 9); for, though David and Solomon doubtless did some building (*II Chron.*, viii. 2-6), probably this was more in the outlying

parts of the kingdom. Probably to this fortifying of Rehoboam we must attribute the wall which I have traced along the north and west of the town, forming a tower at the northwest corner. The four rebuildings which may be traced on the east-face section must belong to some of the fortifying mentioned as having been done under Asa, Jehoshaphat, Uzziah, Jotham and Manasseh. That the main building here does not belong to later times than Nebuchadnezzar's destruction is shown by the scanty remains of post-exilic times found on the very top of the mound, a Persian coin and pieces of Greek pottery of the fifth century. On the south side a different character of walls is found; one of the later being a massive brick wall 25 feet thick, and still of a considerable height. Probably this belongs to Manasseh's work, about 650 B. C. This was built over a great *glacis* slope, formed of blocks of stone faced with plaster, which can be traced for forty feet height of slope; perhaps this may be attributed to the hasty defences by Hezekiah at the time of Sennacherib's invasion in 713 B. C. A flight of steps of rather rough stones led us to an ascent of the *glacis*, which has now perished in the valley, and there is the gateway of a building at the foot of the steps, the rest of which has likewise been washed away. As this building may be attributed to about 700 B. C., or earlier, its character is important in the question of stone-working. There is the system of drafted stones, with a smooth edge, and a rough lump on the middle of the face; but there is no trace of the "claw tool," or rather comb-pick, as it may be more intelligibly described. On the masonry at Jerusalem this is a constant feature, and we will notice later on the importance of this matter. This *glacis* slope overlies the earth, which is piled 10 feet deep around a large building, the line of which I have traced on the east side. This building is 85 feet long, with walls of clay brick over four feet thick. It must be considerably earlier than the *glacis* to allow of ten feet of accumulation; and as the *glacis* is not likely to be earlier than Hezekiah, the building can hardly be of Ahaz; but it rather belongs to the long and flourishing time of Uzziah. Indeed, on a regular scale of accumulation of deposits, we should need to date it back to Jehoash; but we can hardly be too early in dating it to 800 B. C. Then ten feet below this is another clay-brick building, which we should accordingly have to date back to 900 B. C., or earlier—perhaps 1000 B. C. It has, moreover, been ruined and burnt and then constructed out of the old materials very rudely. Though of clay-brick, it had doorways of fine, white limestone, and some precious slabs of these yet remain, turned upside down in the reconstruction. Four of these show us a curious form of decoration by a shallow half-pilaster, a very sloping shaft, resting on a low cushion or quarter-round base, and with a volute at the top, projecting, without any separate capital or line, across the shaft.

We are here face to face at last with work of the earlier Jewish kings, probably executed by the same school of masons who built and adorned the temple of Solomon. We see decoration which we must suppose to be closely akin to that of Solomon's time—if not, indeed, as early as that itself. We learn that the Ionic volute, which the Greeks borrowed from Asia, goes back to the tenth century in Asiatic art; and we can hardly fail to see its origin from a ram's horn, thus leading us to a pointed suggestion as to the form of the "horns of the altar." Besides these wall-slabs there are fragments of a cavetto moulding from the lintels of the door, exactly like that of the early Jewish monolith shrine at Siloam. Three of these pilasters have been found, and, though not thought worth removal by the Turkish officials, not one of them can come to England. I have taken casts and photographs of them, and carefully reburied them in known spots. Besides these, one of the slabs had a graffito on it representing a lion (?) walking; and as it was upside down it must have been scratched in the time of the first building. Unfortunately the remainder of this building is beneath 30 feet of earth, and the small prospect of there being anything else of importance in it makes it scarcely worth while to undertake such a weighty clearance. No small objects have been found in the ashes so far.

Another matter of importance in itself, and of inestimable value for future exploration, is the fixing of a scale of dated pottery. Poor as Tell Hesi is in some respects, it is full of potsherds; and the chance of such a grand section as that of the east face from top to bottom gives us at one stroke a series of all the varieties of pottery during over a thousand years. We now know for certain the characteristics of Amorite, of earlier-Jewish and of later-Jewish pottery influenced by Greek trade, and we can trace the importation and the influence of Phœnician pottery. In future all the tells and ruins of the country will at once reveal their age by the potsherds which cover them. Without entering on details, we may distinguish the Amorite by the very peculiar comb-streaking on the surface, wavy ledges for handles, and polished red-faced bowls, decorated by burnished cross-lines. These date from about 1500 to 1100 B. C., and deteriorate down to disappearance about 900. The Phœnician is a thin hard black or brown ware; bottles with long necks, elegant bowls, and white juglets with pointed bottoms. Beginning about 1100, it flourishes till about 800 B. C. It develops into the Cypriote bowls, with v-handles, painted in bistre ladder patterns, which range from about 950 to 750 B. C. Due also to Phœnician influence seem to be the lamps from about 900 to 750 B. C., formed by open bowls pinched in at the edge to form a wick-spout. These were succeeded in the time of Greek influence, from 750 B. C., by the same pinched type, but of Greek ware, and with a flat brim. The Greek influence is also seen in the massive bowls of drab pottery, like those of early Naukratis, and the

huge loop-handles, such as belong to both Naukratis and Defenneh before 600 B. C. All these approximate dates are solely derived from the levels of the walls and the thickness of the deposits; but they agree well with what is otherwise known.

The methods of stone-working are another great key to the age of work. In the Haram wall at Jerusalem all the stones are dressed with the comb-pick (or "claw-tool") down to the very base, as Professor Lewis states. This tool in Egypt is characteristic of Greek work, and it was used in pre-Persian work in Greece, pointing to its being of Greek introduction. Now in the masonry of the period of the kings here we have a strong test of the question; and in no part either of the gateway, steps or pilaster-slabs is any trace of comb-pick to be seen. The evidence, therefore, is strong that the tool is a sign of Herodian and later ages; and we must ascribe the whole of the Haram wall to Herod. This also strengthens the view that Ramet-el-Khallil is an early building, as no trace of comb-picking is seen on the massive blocks there, but only on the later relining of the building.

As the Turkish Government claims everything, all the perfect pottery has been taken by the officials, and the stone-work is left to be destroyed by the Bedawin. Casts, photographs, and potsheards (such as any visitor can pick up here) are all that may be brought to England. These will be exhibited this summer in London, probably along with my Egyptian collections of this season.—*Academy*, July 26: cf. A. H. SAYCE, in *N. Y. Independent*, August 28; and *Biblia* for September.

PHENICIA.

FURTHER DISCOVERIES NEAR SIDON.—As nearly as can be ascertained from reliable sources, the facts concerning the recent archaeological discoveries near Sidon appear to be as follows: In a cave near the foot of Mount Lebanon, about 2 miles distant from the Sidon seashore, five stone sarcophagi, with various finely carved figures upon them, have recently been discovered; but, as the inscriptions upon them have not yet been deciphered, and the sarcophagi, as well as the photographs taken thereof, are jealously guarded from intrusive eyes, nothing positive as to the period of classic art to which they belong can be stated with any degree of accuracy. At some later date it may be possible to give fuller details. The cave itself is 27 feet long, 2 ft. wide, and 7½ ft. high. On the upper side-wall of the cave, opposite to the entrance door, there is a mosaic of most exquisite workmanship. It represents the colored figure of a woman in most delicate mosaic, belonging, doubtless, to some distinguished old Greek family. Judging from the Greek inscription, the mosaic would not seem to be of very remote antiquity; but, owing to its incomparable beauty and perfection, it will prove a most valuable addition to the collection of the

Imperial Ottoman Museum at Constantinople. Another authority claims that there are two figures of women in mosaic, one in green, the other in blue, both being pronounced to be Phœnician remains.

Other objects, found in another site, are columns, figures, statuettes, and various ornaments of Greek workmanship, of all of which photographs have been made and sent to the Museum at Constantinople, where the originals are soon to follow.—(*U.S. Consular Reports*) E. BISSINGER, United States Consulate, Beirut, January 27, 1890: cf. *Athenæum*, June 21.

A SIDONIAN CIPPUS.—M. RENAN presented to the *Acad. des Inscri.* a reproduction of a cippus from Sidon with a Phœnician inscription which he thus translates: "This offering was given by Abd-Miskar, son of Abd-Lesept, second magistrate, son of Baal-Sillekh, to his lord Salman; let him bless." The god Salman is of Assyrian origin, and enters into the name of Salmaneser and that of the Palmyrene goddess Selamania. The offering mentioned was the *anathema* placed on the cippus.—*Paris Temps*, April 29.

ASIA MINOR.

PROFESSOR RAMSAY'S EXPLORATION IN ASIA MINOR (cf. pp. 197-8): **NOTES FROM PISIDIA, ISAURIA, AND KAPPADOKIA.**—W. M. RAMSAY and D. G. HOGARTH write to the *Athenæum* (of July 26 and Aug. 16): "During twelve days spent in the Pisidian mountains we have completed the first instalment of our task this year, namely, to supplement and connect previous surveys of the geographical and archaeological features of the country about the great lakes. We left Smyrna on June 14, and travelled up the railway to its new terminus at Dinari (Kelaimai-Apameia). The extension, lately completed by the energy of Mr. Purser, from Seraikeny to the head of the Maiandros, is the greatest step in the development of Anatolia which has been taken for centuries. For the tourist the line does much: Hierapolis, Laodikeia, and Kolossai are now within two or three miles of railway stations, and can be visited with ease and comfort. At *Dinari*, we copied half a dozen new inscriptions, two, one Latin and one Greek, being of unusual interest; and we left it on June 16. In the course of the next two days, we visited the sites of *Konana* and *Seluokeia Sidera*, and obtained inscriptions of little interest. The third evening found us at *Egerdir*, and we took the opportunity of visiting the ancient monastery which has survived on the island of Nisi in the lake. It possesses a *ms. lectionarium* of the fifteenth century. Hence, we struck into the wildest part of Pisidian Taurus. We first crossed into the valley of the Upper Eurymedon, and found at *Tojalas*, near the site of *Timbrias*, a number of curious Pisidian epitaphs. A very long ride, during which we had to cross country of terrible difficulty, brought us to Kara Bavlo, the site of Adada, discovered by Schönbörn, and since visited by Professor Sterrett.

"The situation of **ADADA** is certainly striking. In a country that consists chiefly of impassable mountains it is a really important road-centre; amid a wilderness of rocks it commands a large extent of most fertile territory. We had great difficulty in finding it, and still greater difficulty in leaving it; and our experience was the best proof that the country can hardly be traversed except along a few routes, almost all of which pass through Adada. We found no road that is not indicated in Kiepert's most recent map, but we learned that some of his lines indicate routes which could never be made passable, except by unlimited tunnelling and bridging, while others, though poor enough at present, might easily be put in a very fair condition. The latter pass through Adada. This knowledge, which could not be got from previous travellers, introduces order into the topography of this whole district. Prof. Sterrett has very briefly described the ruins of Adada, whose name he did not know, and has copied the inscriptions with great diligence and accuracy. We had only about six hours of daylight available for work at Adada, and most of this was taken up in making a rough survey of the extensive and remarkably well-preserved ruins. The city, as Mr. Headlam first observed, occupied originally a small hill (called by Sterrett the acropolis), and a larger double-peaked hill to the southwest of it. The lines of fortification of this earlier city, partly natural and partly artificial, lay high above us on the right, wall above wall, as we approached by the road from Perga. This Pisidian hill-fortress, under the prosperity and peaceful government of the Roman Empire, was extended to the north so as to fill great part of a valley shut in by hills of no great height. This larger city whose extreme length was about 700 yards, with a breadth of about 200, was not fortified. The Agora lies partly inside and partly to the north of the earlier city, whose walls were destroyed in part to allow of the extension. It extended probably up to a building of peculiar shape, in fair preservation, about 180 yards north; but great part of it is a heap of confused ruins. Our survey indicates roughly the situation and shape of all the buildings which can be distinguished with certainty, but necessarily leaves out the great majority. 200 yards further north there are three small temples, in two of which the walls are practically complete. Inscriptions show that the city contained temples of Aphrodite, of Serapis, and of the Fatherland, and that the cultus of the emperors was associated with and put before each of the other cults; but there are difficulties, which need not be here mentioned, in assigning the names to particular buildings, owing to the fact that Prof. Sterrett is not quite so accurate in stating the locality of his inscriptions as in copying the text. Of his thirty-four inscriptions we saw only fourteen, besides one which he had not observed; a few we copied more completely, but in most we only confirmed his text. With little

trouble and no great expense the mass of ruins might be sorted and thoroughly examined, the whole plan of the city discovered, and a great deal of information obtained about its condition under the Empire. For a picture of society, as it was formed by Græco-Roman civilization in an Asiatic people, there is, perhaps, no place where the expenditure of a few hundreds would produce such results. Those who hold the opinion that the most important and interesting part of ancient history is the study of the evolution of society during the long conflict between Christianity and paganism will not easily find a work more interesting and fruitful at the price than the excavation of Adada. The modern name, *Bavlo*, is undoubtedly the Turkish pronunciation of Παῦλος. Numerous examples occur where the modern name is that of the patron saint of the church in the ancient city. Adada then was under the protection of the apostle. A mile south of the city, by the road to Perga, stands a little church, apparently of fairly early character, with the separating wall between the place for penitents and the body of the church, and with triple apsidal termination. This church might probably repay examination.

"The difficulty of getting through the mountains to the southern end of the Beysheher Lake can hardly be exaggerated. Three days of continuous riding brought us to Kashaktu at the southwestern corner of the lake; three-quarters of an hour to the east, on a spur of the hills, is a walled site, which there can be little doubt must be identified with the Roman colony *Parlais*; and the identification is supported by the presence of Latin inscriptions in neighboring villages. The ruins are situated precisely in the position assigned on general grounds to *Parlais* in the forthcoming *Historical Geography of Asia Minor*.

"From Beysheher to Konia we took the horse road by Fassiler, thence, southward to visit the sites of *Lystra* and *Derbe*, and to make a tour in *Kilikia Tracheia*.

"We spent July in the *Isaurian Tauros* and *Southwestern Kappadokia*. Our route, on leaving Konia, lay due south to the site of *Lystra* (*Khatyn Seraf*). Here we copied a few new inscriptions and verified old ones, among the latter the milestone in the graveyard of *Kavak*, of which we obtained a more accurate copy, which establishes the line of the Roman road from *Laranda* and *Derbe* to *Lystra*. Some miles to the southeast we found another inscribed milestone upon the same road, standing, probably *in situ*, upon a bridge over the *Tcharshembi Su*. With the exception of *Dorla*, which is full of late epitaphs, the villages in this district contained nothing of interest, and we passed on rapidly by the site of *Derbe* (which should be placed at *Gudelissin* rather than at *Losta*) to *Karaman*. It should be mentioned that we visited *Dinorla*, where Prof. Sterrett placed *Nea Isaura*,

and were convinced from an inspection of the ruins that the identification is impossible.

"From Karaman we elected to travel over Tauros by the easternmost of the two roads to Mut, that passing by Kestel, where we expected to find traces of Koropissos. Nor were we disappointed, for immediately below the village, ten hours from Karaman, we found a ruined city, occupying a strong position above the Tehiri Su. Of the earliest foundation—*Koropissos*—little remains. The imposing structures which make the site remarkable belong to the later Christian city, renamed (as we learn from the *Notitia*) Hierapolis, while the fine acropolis whose towers crown the southern extremity of the plateau is later still, and almost certainly represents the Armenian fortress *Sivilla*, passed by Frederick Barbarossa on his march to Seleukeia. Inscriptions we looked for in vain, but had a hard day's work photographing and planning the site. Of a fine early church we made a detailed plan, and traced successfully the disposition of streets and buildings over the rest of the city area.

VI-Century Monastery.—"We next attempted to find the ruins at *Kodja Kalessi*: we found a guide at Mut, and the ruins four hours to the north-west. They proved to be those of a great monastery: the church, a very fine specimen of sixth-century architecture, is wonderfully complete, and no agencies but those of nature have contributed to its overthrow. The plan of the other buildings is easily traced. From the evident importance of this lonely monastery, and from the character of its architecture and elaborate ornamentation, it seems very probable that *Kodja Kalessi* represents the monastery of *Apadna*, built, according to *Prokopios*, by *Justinian* in *Isauria*. We made plans of the whole group of buildings and drawings of the church, took several photographs, and copied some rock inscriptions. One of the latter will give us a date: it was evidently cut by a monk in his own lifetime; for after recording that he was *πρωτόβρετος* and *παρωνόμιος* of the monastery from the consulship of *Gadamippus* (*Ga[us]us*? *Damippus*), he left a blank space for the date of his death, which, alas! no one has been found to fill.

"Near Mut we discovered the remains of a city, probably *Dalisandos*; the ruins are of late character, but abound in inscribed sarcophagi. In Mut itself we were fortunate enough to find two new inscriptions of considerable interest: one is a dedication to *Zeus Pronasteios*; the other contains the name *Claudiopolis*, thus confirming, at last, *Leake's* conjecture as to the identity of the site.

"The rest of our time in the *Kalykadnos* valley was spent in the vain endeavor to find *Diokaisareia*. In the course of the quest we discovered a solitary temple of the Roman period in very good preservation, and a fort. The ruins about the former were not considerable enough to warrant our

identifying the site as Diokaisareia, but it appears certain that that city must have been somewhere not far away. But no one appeared to know of any other ruins; so we gave it up, and struck the Ermenek road at Imalbazaar, and descended to Selefkeh.

Visit to Olba and Korykos.—"On our way from Selefkeh to the north we visited some of Mr. Bent's brilliant discoveries of this year. We went first to Olba, the ruins of which are among the most interesting in Asia Minor, and fully justify Mr. Bent's description in the *Athenæum* of June 7 (see pp. 351-4); but the temple, though imposing to a distant view, is a great disappointment, being coarse and bad in style without any trace of archaic character. We must express our high admiration of the care and thoroughness with which Mr. Bent examined this and other places that we visited. The way in which he concentrated his work on a small district may be recommended to all archaeological travellers, and his splendid discoveries in a country recently visited by such explorers as Langlois, Duchesne, Sterrett, etc., prove that this method is the one most likely to be successful.

"From Olba we made an excursion to the coast to see the great Korykian inscription discovered by Mr. Bent. We, of course, concede to Mr. Bent the task and the honor of publishing his discoveries; but, as our experience has always been that a first visit cannot exhaust the possible discoveries on any site, we considered that the plan of our journey required us to visit these important remains, and after we have seen them the best way seems to us to place all our results at Mr. Bent's disposal in publishing his account of his journey.

"The city of Olba, like that of Tyana, consisted of two parts, the fortified *polis* and the *hieron* with the town that grew up around it. The latter is about two and a half miles west-southwest of the former, and it was wholly undefended until about the time of Augustus, when the tower described by Mr. Bent was built under the priest Teukros, father of the Ajax who struck a well-known series of coins between 11 and 15 A. D. This tower has originated the modern name Uzunja Burdj, 'the Long Tower,' while the city proper still bears its old name under the form Oura. The *hieron* had a better situation than the *polis*, and almost all the finer buildings and the architectural features of the city during the Roman period were placed beside it; but the *polis* was still inhabited, and about 200-210 A. D. an aqueduct was built to supply it with water. This aqueduct bears a dedication, justly described by Mr. Bent as 'dreadfully obliterated,' in honor of Septimius Severus, Caracalla (Geta erased), and Julia Domna. But, like Komana, the site of Olba is, on the whole, a great disappointment: the inscriptions are few and uninteresting (except those just mentioned and a Christian epitaph with the name *Sandansaka*), and about the priest-kings of this historically interesting city we learn nothing.

"Mr. Bent's great inscription at Korykos cannot be taken as a list of the priest-kings of Olba. In the first place, it does not contain the name of any of the known priests of Olba. In the second place, it is engraved on the temple at Korykos, and we cannot agree with Mr. Bent in assigning to Olba any authority over such cities as Korykos or Sebaste, any more than we can accept the statement that it was ever metropolis of Isauria in Christian times. Sebaste in particular was a much more important place than Olba, moreover, the position of the inscription and the character of the names suggest a different explanation. The inscription was discovered by Mr. Bent in the wall of a Christian church, which is obviously of no very early date. This church was made by utilizing the temple which stood beside the brink of the Korykian cave. The walls of the *cella* were raised higher, and an apse was built on at the eastern end: the additions are of coarse work, and can be detected at a glance. We made a plan, showing the relation of the two buildings and indicating the *peribolos*-wall of fine polygonal masonry that surrounded the temple. The southern *anta* of the temple has disappeared; the northern still stands, wanting only the uppermost course of stones. The great inscription covers the whole of the front of the *anta*; but the loss of the top stone has deprived us of the preamble. The rest consists of an enumeration of citizens, probably of Korykos, and may fairly be taken as the list of those who subscribed to build the temple, probably about the beginning of the first century after Christ. The inscription was engraved on the stones before they were put into their places in the wall, and by an error of the builders two of the stones were turned upside down as they were placed in position. Our copy, which is almost complete, and the plans of the temple, of the two cities at Olba, and of some other places (several done by Mr. Headlam), have already been offered to Mr. Bent to make use of in his account of the work.

"The Roman road from Laranda, by Koropissos and Olba, to Sebaste was traced by us at various points of its course, partly by cuttings and levels, partly by the pavement and the milestones. We had never travelled along a Roman road with the original pavement unaltered, except by time and weather, and with the milestones still in their original position, until we traversed the last fifteen miles to Sebaste. Most of the stones were either illegible or uninscribed, but we obtained several inscriptions, showing that the road was constructed under Septimius Severus.

Visit to the Hittite Rock-relief at Jorces.—"From Uzunja Burdj we crossed the mountains to Eregli, and thence made a *détour* to Jorces. Our object was to obtain impressions of two of the inscriptions near the great 'Hittite' rock-relief, but we succeeded only with the lower one. However, we made careful copies of all the texts, redrew certain parts of the figures which have been inadequately represented, and took several photographs of the whole

relief. In almost all points we find that the drawing published in the *Archäologische Zeitung*, 1885, was a great improvement on that of Davis, reproduced in Wright's *Empire of the Hittites*. The water of the millstream which flows at the foot of the 'written rock' was low, and we were able to copy several new symbols in the lowest inscription. Of the whole monument we must say that it yields to no rock-relief in the world in impressive character.

Purchase of the Hittite Inscription at Bor.—"Two days later we reached Bor and set about finding the celebrated incised Hittite inscription, discovered there in 1882. Its owner, as before, would allow no squeeze or copy to be made. So we succeeded in buying the stone outright. We conveyed the stone forthwith to Nigdé, lodged it in the care of the governor, and wrote to Constantinople offering it to the Imperial Museum. We hope to convey it thither after our tour in the Anti-Tauros.

"Still more fortunate was our discovery on the next day of a second incised stone, so far similar to the first that it must be a part of the same series of reliefs. It is more than probable that others of the series exist, above or below ground, and all come unquestionably from Kiz Hissar (Tyana). The second stone has been cut into a round shape in modern times, and many of its symbols lost; but a bearded head remains and a large part of the inscription. The characters are, perhaps, somewhat more elaborate than those of the first stone, but their essential character is the same."

AUSTRIAN EXPLORATION.—Prince John of Liechtenstein has offered to the Academy of Wien an annual subvention of 5000 florins for five years, to carry on the archæologic researches commenced by the Austrian expedition in Asia Minor.—*Revue des études grecques*, 1890, p. 101.

KIEPERT'S MAP OF WESTERN ASIA MINOR.—From Dietrich Reimer, Berlin, we receive the first four out of fifteen sheets of a map, by Dr. Heinrich Kiepert, of Western Asia Minor on a scale of 1:250,000. In this work the veteran cartographer, now just completing his seventy-second year, returns in part to an early task. Half a century ago, as he relates, Moltke and other Prussian officers, on coming home from the Turkish service, intrusted to him the geographic data amassed in their official military journeys in Asia Minor, to which he added his own recent observations in the western portion of the peninsula, and, availing himself of all extant literary sources, produced in 1844 a map of Asia Minor on a much smaller scale than the present fragment (1:1,000,000). This map, repeatedly copied, and which has been of the greatest utility to travellers, has hitherto not been superseded, though the Russians have for political purposes within twenty years constructed a larger one (1:840,000). Dr. Kiepert has now used a great deal of unpublished material, and has received much

aid from the labors of archaeologists like Prof. Ramsay and Sterrett (who repay their debt to him), especially in the identification of places; all which he acknowledges most conscientiously and in detail. It is needless to add more to this account of Kiepert's always authoritative work. He has supplied the Turkish and the classical names, using for the former the transliteration recommended by a committee of the Paris Geographical Society. French and English equivalents are often annexed.—N. Y. E. Post, July 7.

HISSARLIK=ILION.—EXCAVATIONS BY DR. SCHLIEMANN.—Dr. Schliemann writes in the *Neue Freie Presse* of June 11: "The excavations which I commenced at Ilion with the help of Dr. Dörpfeld on Nov. 1 of last year and broke off in the middle of December, on account of the winter, were again taken up at the close of February. I had set for myself the main task of uncovering the continuation of the three gate-streets in the lower city, and of bringing to light as much as possible to the south and west of the Pergamos. But great difficulties lay here in our way: the mass of rubbish had a depth of over sixteen metres and consisted of the ruins of the walls of houses erected here by successive settlements in the course of ages; these it was first necessary to carefully excavate and clear, in order to photograph before tearing them down. My work was outside the great enclosing wall of the second city, which was destroyed by some frightful catastrophe; the Romans had destroyed, in the centre of the acropolis, the walls of the houses that form the *débris* lying directly above this layer, in order to raise a plateau; while here, near the walls of the citadel of the Roman city, the house-walls with their foundations are preserved, on the average, to a height of about one metre. They point to four settlements which succeeded one another, in the course of centuries, after the fall of the fifth prehistoric city. By far the most important of these is the *Roman*, whose buildings often have foundations descending to a depth of five metres. Above this comes the *Greek*, then the *archaic Greek*, and, still further below, an *earlier settlement which may be contemporary in date with the palaces of Mykenai and Tiryns*. It is true that the walls of these different periods have, as a rule, no characteristic marks by which they can be distinguished; for they all consist of stones bound with clay-mortar and only very seldom is the Roman lime-mortar used. But the pottery found in great quantities in the houses can leave no doubt as to the age of their construction. More interesting than the Roman and Greek pottery of the classic period are the archaic terracottas of the fifth and sixth centuries, which are often very artistically painted, and were doubtless imported from Greece. It is doubtful, however, whether the theory of importation can be sustained with regard to the vases with geometric patterns of the so-called Dipylon style, or for the terracottas of

the Mykenaian and Tirynthian types among which the *Bügel-Kanne* is especially remarkable. For in Hellas the culture which produced these types came to an end, without leaving a trace, toward the beginning of the twelfth century B. C. through the migration of the Dorians or the so-called return of the Herakleidae: this, in its turn, called forth the Aiolie migration to Asia Minor and especially to the Troad; and so it appears to me more probable that a great deal of pottery belongs to it (Aiolian), and that its art became naturalized in Ilion. This conjecture appears to us all the better grounded that in the fourth settlement mentioned above as contemporary with the prehistoric Hellenic type of colossal masses there appears a kind of monochromatic grey pottery of entirely different form and mode of manufacture, which I had previously held to be Lydian and described in detail in my work *Ilion*, in treating of the sixth city, but which I now must regard as decidedly of native manufacture. For, since writing that book I have—as may be seen in the Trojan collection in the Ethnological Museum in Berlin—come across similar pottery in my excavations in Kebrene, Kurschunlu-Tepe (the ancient Skepeis and Dardania), in the earliest period of the small settlement on the Bali-Dagh behind Burarbaschi, in Eski-Hissarlik, on the Fuln-Dagh, and in the tumuli which are ascribed by tradition to Achilles, Patroklos and Priamos. The house-walls to which this gray ware belongs were cleared away by the Romans in the centre of the city; . . . but, nearer the city-walls are left, . . . and among them are several fortification-walls which may with probability be ascribed to this settlement. Rude hammers, fine axe-heads of cut diorite, corn-crushers, oval hand-mills, knives of silex, etc., are often found in the *débris* of this settlement; while at the same time there also appear long needles with globular or spiral heads which before the invention of the *fibula* served for fastening the hair or clothes.

"Underneath these ruins we came (as before in the excavations of the city proper) upon house-walls of three prehistoric settlements before reaching the level of the second or burnt city which must have existed for a number of centuries. Beside the earlier fortified wall *b* and the later *c*, Dr. Dörpfeld's sagacity led to the discovery of an even older encircling wall of the second city, which, with its towers, is strongly scarped and well preserved; here also the superadded construction is of crude-bricks. We found in the house-walls of the second city three kinds of rebuilding. To the city of the third and last reconstruction, which perished in some great catastrophe, belonged only six or seven large buildings which were all parallel and ran from *s. e.* to *n. w.* The walls, 0.85 to 1.45 met. thick, were provided with *parastatoi*, and consisted, below, of stones joined by clay and, above, of sun-dried bricks. The largest building [perhaps a royal palace *D*] (*A* on plan VII in my *Troja*) contained a hall 20 met. long by 10 met.

wide; the remaining houses are somewhat smaller, but it can be assumed with certainty that a citadel adorned with such stately buildings must have had a proportionately large lower city. We have for a long time been occupied with bringing to light the foundations of the buildings of the two earlier periods, in order to draw up a plan of them. All are constructed in the same manner, as is attested by the masses of crude brick that lie between the house-walls and in front of the fortifications. In the first epoch of the second city we still find a brilliant monochrome black pottery, which seems remarkably like that of the first city, and which little by little becomes improved until it approaches the terracottas as they appear in the third epoch of the second city. On the southern and eastern sides we have uncovered the citadel walls of the third epoch of the second city with its towers, along almost its entire length; and the many signs of powerful heat, which appear on both sides of them, leave no doubt that they were provided with a covered gallery of wood, like that which is referred to as existing on the encircling wall of Athens.

"The walk marked *sc* on plan VII [on the N. E. side of the citadel], which we had conjectured to be a wall belonging to the lower city, has been with great difficulty excavated from a stony mass of rubbish sixteen meters high. It proves to be a ramp by which the citadel was reached, as at Tiryns. Most interesting are the steps by which this ramp was once ascended. Similar but even more primitive steps were uncovered on the south side of the citadel before the S. E. gate. At the S. E. end of the Roman acropolis we excavated a small theatre which may have served as an Odeion, but its covering is fallen and destroyed. The theatre is preserved up to the upper row of seats, which rested upon the surrounding walls formed of great blocks of stone, but are now wanting. The material is a hard limestone; only the lower row of seats is of marble. Two life-size marble statues were found in it, one of which apparently represents the Emperor Claudius I. In any case, the theatre belongs to the first imperial period, as two marble blocks were found bearing inscriptions one of which was of the time of Tiberius."—*Berl. phil. Woch.*, 1890, No. 26.

Dr. DÖRPFELD, on his side, summarizes the campaign in a contribution to the *Athen. Mittheil.*, xv, 2, pp. 226-9. He says: "Our main object was: (1) to determine the surrounding walls of the Pergamos at the different periods; (2) to complete the plan of the second city, the Homeric Pergamos; (3) to study separately, at a spot where this is still possible, the ground-plans of the upper settlements; (4) to uncover a portion of the lower city; and (5) to search for the early tombs. A part of this was accomplished in the middle of June." Dr. Dörpfeld's report gives a number of architectural facts more fully than Dr. Schliemann's. An important discovery was that of two more *parastadoi* or portions of piers belonging to build-

ing c. This had been, until now, only conjectured to be a *propylaion*: now, this identification is certain, and so further evidence is gained for the close relation between the constructions of Tiryns and Troy. West of the s. w. gate a large section was excavated which lay outside the acropolis of the second city: later, it was enclosed within its limits, and contained houses and other buildings belonging to the upper cities. Each stratum was here freed, surveyed, and photographed. In this way, a ground-plan was obtained of all the buildings which were erected over the ruins of the second city. "As soon as we have reached, on this site, the lowest strata, we hope to settle the question whether on this side a lower city was annexed to the Pergamos of the Homeric Ilion. Perhaps even the royal tombs lay directly in front of this gate: we have been, until now, as unsuccessful in our search for them as at Tiryns." The declivities of the citadel, where these tombs would be sought for, are covered up with old and recent *débris* to such an extent as to make research extremely expensive.

The excavation of a part of the lower city will be deferred until next year. Only one building belonging to it, s. w. of the citadel, has been uncovered, namely, the theatre. On account of the liberal attitude of the Turkish Government, it will be possible to accompany the results of these excavations with far more numerous plans than in the book *Troja*.

KILIKIA.—THE TOPOGRAPHY OF OLBA.—Mr. J. T. BENT writes to the *Athenæum* (of June 7): "In my letter to the *Athenæum* of April 5 (*JOURNAL*, p. 188) I notified our discovery of two inscriptions giving us the name of Olba. Not satisfied that this was actually the site of the capital of this ancient kingdom, and being unable owing to the season to prosecute our researches more inland, we waited until the spring, and then traversed the whole of the district from the coast to the Karamanian mountains, which in ancient times would seem to have constituted the toparchia of Olba, a part of Kilikia Tracheiotis. From an inscription on a tomb at the spot where we found the above-mentioned inscriptions we read that those who opened it were to pay so much to Sebaste, and so much to the deme of the Kanygelli, giving us the Sebaste-Eleousa of Ptolemy, which is down by the coast and mentioned by him after Korykos, and the name of one of its demes. From these premises we could safely argue that the rule of Olba extended over Sebaste, and that the priest-kings who are styled on coins 'dynasts of Olba and toparchs of Kennatis and Lalassis' must have had their capital at some other point which had yet to be found.

"From Lamas to the plain of Seleukeia the coast line is thickly covered with ruins, including the towns of Sebaste-Eleousa, Korykos, and Korasios; these ruins are, however, almost all of a very late Roman date, and an inscription at Chok Oren (many ruins), not far from the plain of Seleukeia, gives in a few words what is probably the history of most of them. It tells

us that during the reign of Valentinian, Valens, and Gratian, the governor of Isauria rebuilt from the foundations 'the spot which is called Korasios, which had become desolate and void of houses.' Whether this is the Korakesion of Strabo or not is uncertain, but the name Korasios is very clear in my squeeze; at all events, it confirms Strabo's description of the devastation of this coast by pirates, accounts for the lateness of the coast-line ruins, and explains why the older inhabitants of Kilikia Tracheia preferred to live in fortified towns up on the slopes of the Tauros. The mountains in this portion of Kilikia Tracheia come right down to the sea. A second line of towns occupied the slopes more immediately above the sea level, the names of two of which we were enabled to recover from inscriptions—namely, *Eabbasis* and *Reorbasis*—each with strong polygonal fortresses and walls, and each celebrated for the worship of Hermes. Besides these there were several the names of which we were unable to find, but only the signs which were invariably put up on a corner of the towers. Here I may incidentally mention that at eight different sites we discovered the sign of the club, which eventually proved to be the sign of Olba, and, together with the *triskelion* which surmounted our Olbian inscriptions at Sebaste, is found on Olbian coins (Head, *Hist. Numorum*). This would give us as the least possible area of this kingdom a boundary on the east beyond the Lamas river, and on the west the valley of the Kalykadnos.

"On proceeding further inland, at about seven hours from the coast at Lamas, we halted for some days at extensive ruins now known as Jambeslû, about from 3,000 to 4,000 ft. above the sea level, containing fine *heron*, a sarcophagus, the lid of which is carved into the figure of a lion with its paw on a vase, the characteristic rock-carvings, several forts, the ruins of a temple, and a large early-Christian basilica. We found only three poor inscriptions here, and were unable to recover the name, but on gateways the sign of the club occurs. The same experience awaited us at the next place, Yiennilû, the fortress of which had over the door the club between two triangles. Our next headquarters were at a small village of Yourouks known as Uzenjaburgh, over 4,000 ft. above the sea level, situated amongst very extensive ruins, which proved to be the capital of Olba. First of all, we examined the ruins of an extensive town down in a valley about three miles below Uzenjaburgh. These ruins crown a wooded height surrounded on two sides by narrow gorges crowded with rock-carvings and rock-cut tombs, and on the third side by a little fertile plain. This spot the nomads now call Oura. Prof. Ramsay previous to this imagined that the original name of Olba was *Ourica*, Hellenized to suggest a meaning in connection with ὄμβρος. In ancient times, water was conveyed to this town by a fine aqueduct from the Lamas river; and on the arches which span one of the gorges is a long inscription, dreadfully obliterated, but from

which we were able, with a considerable amount of personal risk, to get a squeeze of the words ΟΛΒΕΡΝΗΤΟΛΙΣ, and read the name of M. Aurelius Cæsar. Oura also had a small theatre, a curious fountain, and yielded one or two minor inscriptions. It is connected with the ruins around Uzenjaburgh by an ancient paved road, on either side of which are numerous rock-cut tombs and other ruins, and the name of Olba again occurred on a fallen column. It would appear that in ancient times the two towns practically joined, and formed the capital of the kingdom of Olba.

"A very large tower, four stories high, with five chambers on each floor, commands the ruins of the upper town; it is 50 ft. 10 in. by 40 ft. 9 in.; and on this fortress are four separate inscriptions, and a very neatly carved club in a frame. The most important of these inscriptions has almost the same formula of dedication as that to the Olbian Jove at Sebaste; again the same strange name *Tarkuarios* follows that of the priest-king Teukros—in the list of names referred to below we found ΤΑΡΚΥΜΒΙΟΥ, possibly Tarkyarios for life (*πρὸς βίον*), and we know of king Tarkondimotos of Kilikia, so perhaps the prefix Tark has some royal significance—then follows a long Kilikian name, and the inscription closes with ΤΟ ΟΡΒΑΛΗΣΗΤΑΟΛΒΕΩΣ, probably giving us the name of this fortress-town which was above the town of Olba. Amongst these ruins the most conspicuous are those of a very large temple with twelve Corinthian columns, 40 ft. high, on either side two to the front and four to the back, each with twenty-three flutings; the building is 127 ft. long, and the *proaulion*-wall which encircles it, and which is covered with marks and letters, is 222 ft. by 209 ft. This temple is wonderfully well preserved, having been a Christian church when Olba was metropolis of Isauria. There can be no doubt that this was the great temple of Zeus to which Strabo alludes, the priest-kings of which he tells us ruled over the whole of the Tracheiotis at one time, so that even in Strabo's time the terms were in use 'the country of Teukros' and 'the priesthood of Teukros' (Strabo, XII. 1).

"There are two theatres on this site, a late Roman arch, a very elegant façade of a temple of Tyche, with a long inscription which identifies it, and from another inscription we found that Dionysos also was worshipped here; and there must have been a plentiful vintage in ancient times, judging from the number of wine-presses and the vats for storing wine. The general appearance of these ruins is very striking. There must also have been a colonnade like that at Pompeiopolis, and public buildings of a large extent cover the whole of the hill-slope. The largest of the theatres, however, is very small, being only 291 ft. on its outer semicircle; behind stood a colonnade of magnificent columns; but there is a second and smaller theatre, and another at Oura. There are no traces of city

walls; but from its position on the highest ground of the immediate district, with gorges of magnificent rockiness running down to right and left as from a water-shed, and with its strong castle, the position of Olba must have ensured absolute immunity from attack. The upper town was furnished with a separate aqueduct, and drew its water supply from the sources of the Lamas beyond Mara.

LAMAS GORGE.—"Our next work was to investigate the Lamas gorge from its mouth by the sea to its source in the mountains of Karamania. It is quite one of the finest works of nature I have ever seen, being never more than half a mile wide, and the precipitous cliffs on either side offering, except at rare intervals, two continuous walls of 1,000 ft. in height. At a distance of every two or three miles we came across the ruins of castles and towns on either side, and abundant evidence of the rule of Olba from the oft recurring sign of the club. But only in one case did our inscriptions give us the name of the town, namely, **BEMISOS**, which from the magnitude of its ruins must have been nearly as large and important as Olba itself, and had its own particular sign, the shield and spear, which appeared side by side with the club.

"The features of this district are the rock-cut reliefs of men in armor with lance and spear—there are several of them in the Lamas gorge—and the sanctity of caves dedicated to Hermes and walled up with polygonal masonry. We found three of these caves in the toparchia of Olba; one near Eabbasis, three stories in height, with several inscriptions; another near Bemisos, in the Lamas gorge; and a third, also with an inscription, in a gorge near Maidan, or Reorbasis, as the town was presumably called in ancient times. On coins of Korykos, Hermes figures largely, and in this district we found many caducei carved over gateways or on the rocks.

THE KORYKIAN CAVE.—"Of course the great caves or natural holes on the plateau near the sea constitute the most familiar feature of the district, for one of them is the far-famed Korykian cave, the abode of the giant Typhon (Pind., *Pyth.*, l. 31). By stopping several days in a ruin near the edge of the Korykian cave, we were able to study it closely and supplement considerably the information given by previous travellers. At the entrance to the hole itself, which penetrates the bowels of the earth for over 200 ft., we unearthed a quaint four-versed epic cut on the rock; it is in hexameter and pentameter, and breathes the spirit of the divine mystery which here uttered the frenzied oracles. Much in the same strain is a Christian inscription over the door of a Byzantine church which blocks up the entrance to the hole.

Ruins of a Christian Church.—"Immediately above the cave stand the ruins of a Christian church, built with stones from a temple of Zeus, the

remains of which crown an eminence about a mile above the cave. At one edge of this church we accidentally discovered that stones inscribed with a list of 162 names, some with and some without patronymics, were walled up. The earliest of these show many curious Kilikian names, which run gradually into Greek names, which in their turn become mixed with Roman names. On carefully studying this long list, I am inclined to think that they form a list of the priest-kings who, Strabo tells us, ruled over the Tracheiotis, for the following reasons: *firstly*, we have the name Teukros frequently repeated; *secondly*, the name Polemon occurs, which we find on coins as dynast of Olba; *thirdly*, Hermokrates, a priest whose name occurs in an inscription at Eabbasis; *fourthly*, there are several of the name of Zeno-phanes, one of whom Strabo tells us was the father of Aba and one of the tyrants of Olba; and, *fifthly*, the last of the names is Archelaos, and Strabo tells us how this portion of Kilikia Tracheia was handed over by Augustus to Archelaos, king of Kappadokia, and he ruled over the whole district, except Seleukeia, until his death, when Kilikia Tracheia became a Roman province. The temple of Zeus, on the hill above, was built of similar stones, and very little of it is left standing. Hence the presumption is that this list of names was cut on the walls of the former temple, and brought down for building purposes by later inhabitants. Close to the temple we found a dedication to the Korykian Zeus in similar phraseology to that of the Olbian Zeus, and a scribbling on the wall invoking the deity."

MYTILENE=LESBOS.—C. Cichorius has communicated to the Academy of Berlin (Nov. 7, 1889) some important inscriptions discovered by him now placed in the temple of Asklepios at Mytilene where the epigraphic archives of the city were collected. He found them in the Turkish fortress which had already furnished several texts of the kind (*Revue arch.*, 1889, II, p. 119). Among the new documents there are fragments of senatus-consulti and imperial letters emanating from Augustus. Some lines of a letter of Julius Caesar are the first authentic specimens we have of his Greek style. It reads: [Γάιος Ἰούλιος Καῖσαρ αὐτοκράτωρ] ὡς διατάτω τ[ὸ] τ[ρί]τον καθ[ε]σταμένους Μυτιληναίων ἀρχονσι βον[η]λῇ δήμῳ χαίρειν καὶ ἔρρωσθαι καὶ [ἐ]νγαίνειν. Ἐπεὶ δὲ βούλομαι ἐιργετέιν τὴν πόλιν καὶ οὐ μόνον φυλάττειν τὰ φιλόπρωπα, ἀδ[ε]λφ[ο]ὶ διεπράξασθε δι' ἡμῶν, ἀλλὰ καὶ σῶσαν[τες] εἰσάγειν αὐτά . . . ἡσυχίᾳ τὴν ἡγεμονίαν φιλίας δόγματος τε ὑμῶν συγκεχωρημένοι δι[α]τίτοιμα πρὸς ὑμᾶς τὸ ἀ[ν]τίγραφον]. The date of this fragment is October-December 709. It is badly mutilated.—*Revue arch.*, 1890, I, p. 283.

PERGAMON.—CONTENTS OF THE GREAT SARCOPHAGUS.—The contents of the great sarcophagus, whose discovery was mentioned on p. 90 of vol. v, have been described by M. Kontoleon in the *Athen. Mittheil.*, XIV, p. 129. Among the forty-two objects are a finely-engraved agate with a bust of Hera, gold jewelry, a gold bracelet adorned with gems, a gold ring with

bezel engraved with a head of Athena, another with a standing figure of Athena, glassware, an ivory plaque with an Eros in relief, six balls (of which three are crystal, one electrum, and two sardonyx), a small silver bas-relief representing a Centaur and an Eros, another with Aphrodite and Erotes, a tortoise, grasshoppers and votive clubs in electrum, an egg of jasper, a small onyx vase, a coin of a Roman emperor, another of Pergamon (?), a tessera with a male bust and on the other side the inscription ΧΙΙΙΙ(Μ)ΕΝΔΑΝΔΡΟ(Σ)|Δ. All these objects have been carried to Constantinople.—*Revue arch.*, 1890, I, p. 290.

SMYRNA.—Dr. HUMANN reports that in the neighborhood of Smyrna he has excavated five marble lions of gigantic size.—*Athenæum*, May 24.

KYPROS.

KOURION.—M. DE CASTILLON'S DISCOVERIES.—M. Reinach gives some details (*Revue arch.*, 1890, I, p. 286) regarding the discoveries made by M. de Castillon at Kourion (1886-7). They include, especially, some fine bracelets adorned with animal heads; a magnificent gold ring with an engraving representing a vessel; a large Panathenaic vase with an inscription and the representation of a chariot race, in admirable preservation; numerous jewels in gold and silver; etc. The contents of the tombs were exclusively Hellenic, though it is said that the excavation neglected the common pottery. These discoveries should be placed in the Louvre without delay.

SALAMIS.—EXCAVATIONS BY THE CYPRUS EXPLORATION FUND (see pp. 190-96).—Messrs. MUNRO and TUNBS write from Salamis under dates of April 26, May 10, and June 1: *April 26.*—"Of the sites working immediately after Easter two are practically done with. The large building with massive limestone columns did not yield encouraging results, and it has been, for the present, abandoned. Τοῦμα ran dry two days ago. The main trench is exhausted, and we are now filling in the holes. The finds continued to the end to be of the same interesting character as before—scarabs, little porcelain figures, and statuettes of terracotta or limestone, with fragments of colossal statues in painted drapery. On the other hand, the Agora has been taken up again on a small scale, with the view of settling some dubious points. It has given us a pretty little head from a marble statuette.

Second Site.—"There remains the sand-site by the house, on which our main forces have been concentrated. Progress has been slow, owing to the enormous depth of sand, fully twenty feet, with which we now have to contend. The east wall, with the great fluted marble columns, is gradually being cleared, and several of the bases have been found, one of them supporting a large standing fragment of column. On the east side of the

wall is a tessellated marble pavement, apparently well preserved, and a fragment of dark-blue marble column with twisted fluting has just been uncovered. Finds of fragments of marble statues of the Roman period have been fairly frequent, and one female head, slightly under life-size, is an admirable example of the best work of the time. It is a hopeful sign that the east side is the productive side of the site, and that heads are to be found there but little damaged.

May 10.—"One main site is now in work, that of the supposed Zeus temple in the sand. The east front wall is being thoroughly cleared down to the level of the soil. That much still remains to be done will be sufficiently apparent from the fact that the centre of the parallelogram is as yet all but untouched, that the south wall is opened only at its two eastern and western corners, that the remains beyond the limits of the colonnade wall northeast and southeast are necessarily left on one side; and even the section of the east wall, which has been so prolific of statuary, has as yet only been worked to the sand level, and the soil beneath, in which, to judge from previous digging a few weeks back, there is still plenty of spoil, has been left untouched. Thus confined as our operations necessarily are for want of funds, we have little that is new from an architectural point of view. That the large fluted column which I described in my last report did form the east front of the temple seems now practically certain; beyond them we have just tapped, and tapped only, a mass of later constructions high up in the sand, and beneath them there are, no doubt, older remains. Of actual finds more may be said. The fortnight opened with the uncovering of a colossal nude male torso, of late but good work, to which, apparently, belong some lower portions of a similar figure found a few days before. Since then there has been added to the list a marble statue, under life-size, of the regis-bearing Athena, in the usual pose, but wanting head and arms. The work is Roman, as is also that of another female statue now nearly complete in three fragments, but with the head wanting. Thus at one time or another in the course of the excavations quite a line of statuary has been found following the direction, but by no means preserving the limits, of the east wall.

Tombs.—"We had resolved to make some trial of the tombs; but virtually the only tomb worked is a large Roman sepulchre not far from the monastery of St. Barnabas. The villagers had already attempted to rifle it, for the shaft had fallen in, but had somehow been frightened off. The tomb is finely made—cut in the rocks—with a triple arrangement of couches on which were placed sarcophagi of terracotta. The contents, which are undamaged, are characteristically Roman—earrings, terracotta lamps and vases, glass.

June 1.—“The season’s work at Salamis was brought to a close on May 24. On the 28th, the antiquities were divided with the Government, and two days hence the excavators’ share will sail for Larnaca on its way to England. Of the last fortnight of work the first week was a very active one. With the second came the beginning of the wheat harvest and the news that no further funds were forthcoming. The site south of the Enkomi road, *Τοῦμα τοῦ Μιχαήλη*, led to no tangible results beyond a quantity of fragments of inscriptions. The rock lies within a few feet of the surface, and any buildings that may have existed upon it have totally disappeared. A fresh try was made for tombs in a large field to the north of the same road. Tombs were found in abundance, which, though small, were of good construction, and of fairly early date. But all had been systematically robbed, the robbers tunnelling from one to another through the thin dividing walls. From May 16 onward, the work was confined to the sand-site.

“The progress made may be briefly summarized. The east wall, with the great marble columns, has been laid bare from end to end: the marble pavement to the east of the wall has been cleared as far as was practicable, and followed eastward in one place up to the limestone wall, which seems to bound it in that direction: at this easternmost point an admirably constructed limestone wall was discovered, extending some feet downward below the level of the pavement, and serving as a foundation for inferior late building: at the north and south ends of the marble pavement two steps, similarly paved, lead upward, and beyond them there is, at least at the south end, a marble pavement at a lower level again. All along the eastern extremity of the excavation there seem to be remains of extensive limestone building, large squared blocks, architectural fragments, and walls. These remains, together with the enormous depth of sand, hindered progress not a little. During the course of these developments, besides a number of fragments, two more headless marble statues were found, a small marble head, and the upper part, without the head, of the colossal female marble statue. With the last was a hand holding a snake, of the same scale, which seems to prove that the statue represents a goddess. Another point which was investigated during the last week of work was the centre of the site. Nothing, however, came to light but a remnant of poor wall. It must be sufficiently obvious that the sand-site is far from finished, lack of money alone stopped the work. The limestone remains at the eastern extremity of the site are of great interest, and it may be that they only commence the really important part of the building. It is noteworthy, although perhaps accounted for by the greater depth of sand, that only the east end of the site has been at all fertile in antiquities; and it must be remembered that the level of the pavement has not been passed, except in the single cutting made to investigate the above-mentioned limestone wall. Another

season's work is urgently called for, and it is to be hoped that, after so much has been done, funds will not be lacking to complete the excavation. We commend both this site and the great field offered for further operations by the ruins of Salamis to the liberality of the subscribers to the fund."—*Athenæum*, June 14, July 5.

EUROPE.

GREECE.

ODYSSEUS' FEAT OF ARCHERY.—A solution is offered, in the *Berl. phil. Wochenschrift* (1890, No. 23), of the vexed question as to how Odysseus could have shot through a line of twelve raised battle-axes. It is based upon a bronze axe-head, of pre- or early-Homeric period, which is pierced by two good-sized openings apparently in order to be sparing of the metal. Calculating for the usual length of the handle, it is evident that, if twelve such axes had their shafts stuck in the ground in a line, it would be possible to sight through these holes in their heads and to shoot through them. The main difficulty in this explanation is the fact that the Homeric text of 422 seems to indicate a hole not in the blade but in the handle.

ARTIZANS' WORKSHOPS.—N. BLÜNNER has published in the *Athen. Mittheil.*, xiv, p. 150, two vase-paintings (one found at Abai, the other on the Akropolis, and both now in Athens) which represent ceramic workshops. At the same time he publishes a basrelief of Larissa showing a carpenter working on a plank with a *σκέπαρον*.—*Rev. arch.*, 1890, i, pp. 261-2.

ARGOS.—**INSCRIBED BASRELIEF OF ZEUS KRATAIBATES.**—An interesting inscription at Katsinkri, a village near Argos, has recently been published by M. J. Kophiniotis. It runs as follows: Δ'ΟΞ|ΚΡΑΤΑΙ|ΒΑΤΑ. It is placed on the side of a square tablet of marble which contains a pediment, on which is a relief representing Zeus grasping a thunderbolt in his right hand, and with extended left. The tablet is broken into three pieces. It is of the Roman period, and probably belongs to the second century of the Christian era. The epithet *Krataibates*, applied to Zeus, is new; it is in no way to be confused with the *Kataibates*. M. Kophiniotis quotes *χηρμάδες κραταίβοιοι* (Eur., *Bacch.*, 1096), and *θώρακες κραταγύαιοι* (H., xix. 360), *κραταίλεως* (Æsch., *Ag.*, 652, and Eur., *El.*, 534), and *κραταίποισ* (Pind., *Ol.*, xiii. 81). It may be assumed, therefore, that Zeus *Krataibates* was the god of the descending thunderstorm.—*Athenæum*, July 12.

ATHENS.—**AKROPOLIS.**—*Statues by Lykios son of Myron.*—M. Lolling has published in the *Δελτίον* (1889, pp. 179-200) a long essay on two bases of Pentelic marble, discovered near the s. w. corner of the Parthenon, in which he recognizes the bases of two equestrian statues mentioned by Pausanias

as placed at the entrance of the Akropolis and which he was inclined to believe represented the two sons of Xenophon (I. 22. 4). The study of the epigraphic fragments belonging to these bases and other reasons lead M. Lolling to believe that they were ex-votos dedicated by the Athenian horsemen after the conquest of Euboia by Perikles in 446, Lakedaimonios (son of Kimon), Xenophon and Pronapés being hipparchs. These statues were the work of Lykios son of Myron; and, if M. Lolling's hypothesis be admitted, we would have an approximate date for the ἀμωί of this sculptor.—*Revue arch.*, 1890, I, p. 257.

Cisterns.—In clearing the ground north of the Parthenon, several large cisterns cut in the rock were found, placed symmetrically in relation to the temple. This is important, for it shows that these cisterns, far from being Pelasgic or Kranaian, are not older than the fifth century.—*Revue arch.*, 1890, I, p. 257.

NATIONAL MUSEUM.—Plaster casts of the better-known reliefs are being prepared and will soon be for sale. The finds made at LYKOSOURA have been brought into the museum. Among these are several inscriptions of Imperial Roman times.—*Δελτίον*, Jan., 1890.

KERAMEIKOS.—Excavations in the outer Kerameikos at Athens have brought to light more than ten Hellenic graves of the fifth and fourth centuries B. C. Numerous white *lekythoi* and black and red-figured vases were found in them. One large funeral urn, 1.22 m. high and with two handles, represents Herakles slaying the Centaur Nessos and has also three Gorgons upon it.—*Δελτίον*, Jan., 1890.

ARCHÆOLOGICAL NOTES.—The excavations of the Archæological Society at Dipylon, which have been going on for some time under the care of M. Mylonos, have led to the discovery of a wall some fifty metres long and eleven high, which proceeds from the well-known monument of the ox in a northeastern direction. The discoveries made in the graves which have been opened are as yet of small account; at any rate, no sculpture has been met with. The excavations will be prosecuted further. The well-known chapel of the Hagia Triadha has been purchased by the Archæological Society, and will be pulled down, as it is hoped something of interest may be brought to light. The Government has authorized the Society to turn up the ground, which has hitherto been left undisturbed (both in 1862 and again in 1870 and in 1879) because claims were raised to it by private individuals.

An interesting purchase on the part of the Archæological Society is reported: that of one of the most ancient olive trees on the Sacred Way between Athens and Daphnion. It is said to be over two thousand years old.

The cabinet of coins has been put in order again. After the wholesale robbery which took place three years ago, the coins which were saved

were packed up and waited re-arrangement. Owing to the appointment of Dr. Svoronos to the curatorship, the old plan of re-organization, which was interrupted by the robbery, has been revived. The coins have been arranged in the wide galleries of the building of the Academy, and the most interesting are exhibited in suitable show-cases. A rich collection of plaster-casts will serve to complete the collection. The commission which is to hand over the coins to the new director will meet soon. After this is done, the work of cataloguing will be proceeded with.—SPYR. P. LAMBROS, in *Athenæum*, Aug. 23.

BRITISH SCHOOL.—The annual meeting of subscribers took place on July 2nd: the report of the Managing Committee opened by the announcement that the past session had been the most successful that the School had yet held. Twelve students had been admitted. The School had undertaken excavations at Megalopolis, and also, at the cost of the Cyprus Exploration Fund, at Salamis in Cyprus. Messrs. Schultz and Barnsley had continued their valuable work on Byzantine architecture. The donations of money had been rather more than last year, but in other respects the financial position of the School still left much to be desired. The income of 430*l.* was both inadequate and precarious, consisting as it did of subscriptions which might at any moment be withdrawn. An earnest appeal was made by the Committee for aid in placing the School upon a sound financial footing. The Director of the School, Mr. Ernest Gardner, read a report of the session.

The number of students at the School—twelve—was twice as large as that at the French or any of the other schools during the past year. After the fashion of the French and German Schools, the meetings are divided into open meetings, attended by the members of the foreign schools and others interested in archaeology (papers involving original research are read by the Director and students, and reports of excavations are produced), and private meetings of a less formal nature, intended primarily for the students, at which lectures are delivered by the Director varied by discussions. Twenty-four of these latter meetings were held during the session, alternately at the School and at some museum or site in Athens. At the open meetings the attendance varied from thirty to fifty, and some six of them were held. Among those who read papers were the Director, Mr. Tubbs, Mr. Loring, Mr. Richards, and Mr. Woodhouse. Several of the papers will appear in the *Journal of Hellenic Studies*.—*Athenæum*, July 12.

ATTIKA.—**EXCAVATION OF THE TUMULI.**—In pursuance of the plan of the general director, Kabbadias, for the systematic excavation of the tumuli of Attika, work has been already completed at the places called Belanideza and Bourba.

BELANIDEZA.—The graves discovered in the mound, here, were enclosed by a *peribolos*-wall. This consisted of rectangular blocks of poros stone set at intervals from each other surrounding the graves and with their in-

terestices filled in with burnt bricks. These bricks seem to have been used only for economy's sake, and were not a later filling in of what were at first entrances through the poros-wall. The *peribolos* was preserved in but a small part of its circuit, because the stones had been put to other uses, but chiefly for covering later graves; and the brick part of the wall, of course, crumbled away when the stones were gone. Besides this *peribolos*, a piece of brick wall was found within the tumulus at several places; it averaged about two metres and a half in height. The greatest height of the tumulus as at present inclosed by the *peribolos*-wall was 3.6 m. at the centre. This was less than its original height, because it had been burrowed into by persons in search of antiquities, but they had not gone deep enough to find anything. The well-known stele of Aristion was originally brought from Belanideza, and possibly may have been erected on this mound, as this was the highest mound in this locality, and was found to contain inscriptions that dated from the same period as that of the Aristion stele.

Nineteen genuine Hellenic graves were found beneath the mound, and above them, and buried in the mound, were six sarcophagi and several urns that certainly belonged to later and Roman times. The Hellenic graves did not appear to have been all made at once as if to receive the dead of some battle, but most probably they belonged to some tribe or phratry. Three graves were situated near the centre of the enclosure, and the other sixteen were disposed in a circle around them. Two of the central graves had a groove at each end, as if to admit a draught of air to assist the burning of the bodies; for, in fact, these graves were quite filled with charred matter. Another peculiarity of these two graves was that, above the natural level of the ground, they had a sort of roof made of rough stones set together after the space between them and the grave and its roof had been filled up with earth. Their construction showed that one of these graves (*z*) was older than the other (*x*). Only one contained pottery the other being empty. The large deep (3.3 m.) central grave (*n*) was peculiar, from the fact that it narrowed abruptly at a depth of 2.3 m.; and, in this lower and narrower part of the grave, the dead had been placed in a wooden coffin. These three tombs seem to have been made before the mound was heaped over them; but the other graves at its circumference could have easily been dug afterward, and thus the pieces of brick wall found in the mound probably served to sustain the earth while these graves were being dug. Three periods could be distinguished in these graves which were later than the mound and placed near its circumference: (1) graves (like *x*) in which the excavation narrowed quickly at the bottom and the dead lay in wooden coffins; these graves showed *lekkythia* and rough black ware of other sorts; (2) shallower graves with perpendicular sides and with-

out any traces of wooden coffins; these graves contained usually several vases and *lekythia* each; many of which were painted; (3) graves composed of sarcophagi of porous-stone and belonging evidently to the Roman period. The graves of the second period show from their remains that they belong to the fifth century. Buried in the tumulus were found four pieces of stone inscribed with letters belonging to the sixth century, and similar to those of the stele of Aristion. The names of persons inscribed on them show, by their number, that they must belong to the graves of the first period and not to the three earlier graves in the centre of the tumulus.

BOURBA.—The excavations in Bourba have not yet been published; but it may be stated, that similar channels for facilitating the draught of air have been noticed there. Further, in Bourba there was found a brick chamber roofed over and adorned with a cornice; a circular grave walled with rough stone, such as is rarely found in Greece; and an inscribed vase was found still in position and bearing the feet of a statue.

PETREZA.—At the conclusion of work on the tumulus at Petreza, was found, near the centre of the mound, a single grave, on account of which the mound had been raised. A small black-figured vase was found bearing the following inscription of the sixth century B. C.: Μνεσ[ικλε]ίδες: εδοκεν: φοβε: Κεαλτες: εγραφεσεν: Around the edges of the tumulus were several other tombs which had been made later.—*Δελτίον*, Jan., March, 1890.

CHALKIS.—**BYZANTINE CHURCH.**—In demolishing the fortress of Chalkia, in Eubœa, part of an ancient Byzantine church has been found, still preserving some good mural paintings of vivid coloring, representing saints. Various architectural fragments and ancient inscriptions were found at the same time worked up in the walls of the fortifications.—*Athenæum*, July 12.

DAPHNION.—In the restoration of the mosaics of the monastic church, the great mosaic picture of the Saviour presents especial difficulties. It is proposed that it should be taken out bit by bit, and, after restoration of the terribly shattered cupola, be put together again.—*Athenæum*, Aug. 23.

DELOS.—M. Reinach refers (*Rev. arch.*, 1890, i, p. 284) to a number of objects discovered in 1889 by MM. Doublet and Legrand at Delos, which are not mentioned in the note on the subject published in vol. v, p. 376, of the JOURNAL.

The investigations were made in the portico of Philip and at several points of the temple of Apollo: the accounts and inventories found are of the year 274 not 275: there are two great decrees of *klerouchia* of about 140 and 130 B. C.; a votive relief to Asklepios; a dedication of the Pisidians to M. Antonius; a signature of the sculptor Hephaiston; and an archaic female statue of life size; two male heads; and numerous terracottas.

ELEUSIS.—Dr. Dörpfeld summarizes in the *Athen. Mittheil.*, xiv, p. 123, the latest excavations at Eleusis. Under the propylæa of Appius Claudius

were the remains of a great tower which protected the access to the sacred enclosure; outside the great propylæa was partly uncovered an immense paved court decorated with two triumphal gates, dedicated by the Greeks to the emperor and the goddesses. Near the eastern door is a great reservoir, doubtless intended for the ablutions of the *mystes*. In the centre of the court are the foundations of the known temple of Artemis Propylæa. s. w. of the great propylæa, Dr. Philios discovered the remains of private houses, decorated with wall-paintings. Certain indications show that the sacred enclosure was enlarged in the fourth century B. C.—*Rev. arch.*, 1890, i, pp. 263-4.

ERETRIA.—The excavations made in the necropolis have been already twice referred to, in vol. v, p. 377, and vol. vi, p. 209. M. Reinach gives a full summary taken from the *Δελτίον* (1889, pp. 74, 83, 98, 115, 136, 150, 155, 171, 173, 213; sepulchral inscriptions in *Δελτίον*, p. 166 *sqq.* The most important objects found during the early part of the excavations and transported to the Central Museum at Athens are the following: (1) woman seated on a rock holding on her knees an open mirror (?) with brilliant coloring; (2) a red-figured *pyxis*, with an obscure inscription, decorated with two groups of two women, one seated, the other standing, with a third walking toward an altar; (3) white *lekythos* with two richly-robed female figures, between which is a stork; above in archaic letters is *Δίφιλος καλὸς Μελανόπο*: another *lekythos* from the same tomb has the same inscription. On others, various scenes are depicted: a warrior; an offering to a stele; a *prothesis*; Charon on his boat with Hermes Psychopompos and a young woman (this painting is said to be a *chef-d'œuvre*); a woman weeping on a tomb; a dead woman, richly dressed, between Hypnos and Thanatos; Athena armed, in a pensive attitude; Odysseus among the sirens; *etc.* Two white *lekythoi* of very remarkable beauty and preservation. The first, 49 cent. high, bears the ordinary subject of the offering to the stele. The second, 40 cent. high, has in the centre, a stele raised on three steps, on one of which is a crowned child holding a wand and raising his hand toward a woman robed in a transparent *chiton* and holding in her right hand one or two javelins; at her feet is a helmet and breastplate: to the right of the child is placed a girl, carrying a basket, who holds her right hand over the child's head: the composition is completed on the right by a bearded man bearing an indistinct object. All these objects have been retained by the Greek Government which paid to the discoverer, B. Nostrakis, an indemnity corresponding to their value.

In a Roman tomb, built of stones cut at a previous period, has been discovered an honorific inscription which mentions the temple of Apollon Daphnephoros at Eretria. The Ephory has confiscated at Eretria a poros-relief representing the head of a satyr of natural size, an inscription with

a decree in honor of Arrhidaios, son of Alexander, and a large number of other inscriptions.—*Revue arch.*, 1890, i, pp. 280-1.

LAKONIKĒ.—A BEE-HIVE TOMB OR THOLOS.—We find in the *Berl. phil. Woch.* (1890, No. 27) a note, taken from the *Ἐφημερίς*, on a new domical tomb found, six hours to the s. w. of Sparta, on the slope of Mt. Taygetos. The *dromos* is 2.65 met. long; the *stomion* is 2.80 met. long, 0.78 wide and 1.16 high. The diameter of the *tholos* is 4.70 met., and the courses are preserved up to a height of 3.75 met. The *stomion* was shut off by a wall. The whole structure is made of small, quite-unhewn stones, and, though strong, without regularity in its courses. The single objects found were trifling. The bones were strewn about, and only the teeth remained of the skulls.

LYKOSOURA.—Amongst the sculptures from the temple of Despoina now removed to Athens, there is a figure resembling the Jupiter of Otricoli in the Vatican Museum, which will prove of great value by throwing light on the relation between the art of Pheidias and that of Damophôn.—*Athenaeum*, June 28.

MANTINEIA.—Excavations of the English School conducted by Gardner and Loring at Mantinea have laid bare the foundations of the *scenae* of the theatre at a depth of 3 metres.—*Δελτίον*, March, 1890.

MARATHON.—OPENING OF THE TUMULUS.—The success of the investigations at Spata, Bourba, and Belanideza led to the resolution to make new diggings at the tumulus at Marathon, on which Dr. Schliemann was at work in 1884. The name, *Soros*, of this mound, which lies at the distance of a mile or so from the sea, was since antiquity a puzzle. Was it *Σορός*, that is simply a heap, a wall of earth, or was it *Σορός*, meaning a coffin, a place of burial? Was it a prehistoric tumulus, or the grave of the Athenians who fell in the famous battle (490 B. C.) of which Pausanias says: *Τάφος δὲ ἐν τῷ πεδίῳ Ἀθηναίων ἔστιν, ἐπὶ δὲ αὐτῷ στήλαι τὰ ὀνόματα τῶν ἀποθανόντων κατὰ φύλιν ἑκάστων ἔχουσαι*? Even before Dr. Schliemann's excavations, an indication which led to various conclusions being formed was the constant finding of heads of obsidian on this obviously artificial mound. Some said these were sure indications of the prehistoric nature of the mound, and led us back to the stone age. On the other hand, Lenormant quoted the passage in Herodotos (vii. 69) mentioning the reed spears of the Ethiopians tipped with heads of hard stone. As the Ethiopians were mentioned among the troops of Xerxes, the French scholar held they might very possibly have been part of the army of Dares and Artaphernes. The excavations of Dr. Schliemann, as they led to the discovery of nothing belonging to the historic period, made people almost certain that the mound was prehistoric, and that it was by no means to be regarded as the grave of

the Athenians. But opinion on this point has altogether changed since the Ephorate of Antiquities determined to reinvestigate the Soros at Marathon.

The hill was originally about twelve metres high, but now, through the accumulations of centuries, the surrounding surface has been raised three metres, so that at present it rises only to a height of nine metres. At this depth (3 met.) below the present surface, there came to light, under the hill, a kind of pavement about 1 centim. thick, and above it a layer of ashes about 2-6 cent. thick. In this layer, besides fragments of wood, are burnt bones and fragments of vases. With the exception of a few other vases, all these fragments of pottery belong to small *lekythoi* of the commonest sort, covered with extremely careless paintings in black figures, such as have been found in great numbers in the excavations of the Akropolis. This hill near Marathon is therefore a general burial-mound produced through the burning and interment of many dead. The vases show this to have taken place at the beginning of the fifth century. There can therefore be no doubt that this was the grave of the Athenians who fell at Marathon.

The excavations have uncovered, thus far, only a small portion of the hill, and were postponed, on account of the heat, until the autumn, when the original form of this monument may be reconstituted.

The *Δελτίον* of this year has (on p. 65 *sqq.*) a protocol of the discovery, and chemical and microscopic reports on the ashes by Mitsopoulos.

The results of the excavations are as follows: at a depth of 13 metres from the top of the tumulus the workmen came upon a *hydria* of clay containing bones and ashes, and beneath it was found a layer, 26 metres long and 9 metres broad, full of ashes, charcoal, and human bones, which had suffered from fire and decay. There were also brought to view small vases, and polished *lekythoi*, mostly dark, which were strewn here and there on the soil of the mound. This layer, so far as it had been laid open, was inspected on June 16th by a commission consisting of MM. Kabbadias, Lolling, and Stais, the architect Kawerau, and Prof. Mitsopoulos. Their opinion was that we have before us the grave of the 192 Athenians who fell in the battle, and whose bodies were burnt by their fellow citizens. Over them were placed vases, and upon the grave was heaped a mound of earth 13 metres high.

So far for the work of excavation. But the results are by no means purely archæological. They are of much historical value. It is well known that the story of the fight at Marathon, one of the simplest in history, yet offers great difficulties to the interpreter, and that there are many contradictory theories as to its exact location, as well as that of Marathon itself. A summary of these is given by Lambros.—S. P. LAMBROS, in *Athenorum*, July 12; DÖRPFELD, in *Athen. Mittheil.*, xv, 2, pp. 233-4.

MEGALOPOLIS.—THEATRE.—This season's excavation at Megalopolis came to an end May 31st. Our new central trench failed to find the *θυμὴλη*, but it did find a new line of walls, nearly 20 ft. in advance of the front of the Greek stage: this is the front of the Roman stage. It is of very bad workmanship, but in excellent preservation. Its discovery made it necessary to widen the trench which contained the Greek stage; and now the entire space between the Greek and Roman stages is clear of earth. The line of wall which we have just laid bare is at a considerably lower level than that of the Greek stage; but the Roman stage was supported on columns resting on this wall, and several of the lower drums of these columns remain *in situ*. They are very ugly columns, with a projecting fillet on either side, rather suggesting the notion that the intervening spaces were filled with wooden panels. They are unfluted, but the beginnings of flutings are visible at the bottom of each column, round the front half only; the hinder portion was never intended to be fluted, and is left quite rough. Another discovery is a pair of bases—one just inside each horn of the stone border of the orchestra. One of these supports a higher cylindrical base, which no doubt held a statue, and which is inscribed with the names of the dedicator, Εὐμαρίδας, and the sculptor (Νίκ)ερος of Megalopolis. The first three letters of the sculptor's name are not absolutely certain. We have also probed high up in the *auditorium*, where there is a broad horizontal line which we have always taken for a δαζωμα. Here we found nothing *in situ*, but we turned out many blocks of stone, several being seats, one big block perhaps coming from the back of the δαζωμα, and another being probably, but not certainly, a step. We were anxious to find traces of steps at this point, for with ten κλίμακες below the δαζωμα there would probably be nineteen above, and one of these would be exactly in the centre, where we dug our trench.—W. LORING, in *Athenæum*, June 21.

THEATRE: SUMMARY DESCRIPTION.—The accumulation of earth over the general level of the orchestra has been as much as from 10 to 12 ft., so that it has been impossible to completely clear the whole area of the orchestra and stage in this short period. The results show us a theatre—the largest in Greece—with an orchestra about 100 ft. in diameter. The *auditorium* is slightly more than a semicircle, about 7 or 8 ft. on each side, and the line of the arc is continued around beyond the semicircle, as at Epidauros, and not run in straight toward the stage, as at Athens. The face of the Greek stage is about 30 ft. in front of the ends of the seats so that there is hardly room for a complete circular orchestra, as at Epidauros. The *auditorium* has nine subdivisions, with stairways between each, and one at each end. These stairs are 2 ft. 6 ins. wide, and rise two steps to each tier. The lowest row of seats takes the form of continuous benches, with seats 16 ins. wide, arms at each end next the stairs, and slightly sloping backs,

1 ft. 9 ins. high. They are solid and cut out of large blocks of stone from 4 to 5 ft. long. Each bench is 16 ft. 6 ins. long, and formed of three or four stones in length. The front of the lower part of these, under the seat, is cut back to allow of room for the feet. They stand on a level with the orchestra, and are divided from it by the gutter, which is built of stone blocks, is 1 ft. 8 ins. wide by about one ft. deep, and falls toward the west. The space between benches and gutter, a foot wide, is very narrow, hardly enough to let one person pass another. Round the orchestra-side of the gutter is a stone kerb, presumably level with the floor; nothing remains to show what was the covering of this floor; it was probably merely beaten earth, as at Epidaurus. No traces have been found of a base stone to receive the central altar, although a trench was dug especially to search for this.

Behind the front benches runs a passageway 3 ft. wide, entered from each end. This must have been the only approach to the lower seats, as the gutter is not bridged at the foot of each stairway, as we find it in the Athenian theatre, to allow the people to pass in and out through the orchestra. The seats behind are merely plain stones, 12 ins. wide, and about 15 ins. high, slightly hollowed in front, and standing up about 4 ins. from the footways, which are 18 ins. wide. The footways and seats are not cut out of one stone, as at Athens, but are separate pieces.

As the one passage and the narrow stairs seem not to provide a sufficient access to the whole of the upper part of the theatre, it is possible that there may have been end staircases; the existence of the double retaining-walls some distance apart seems to supply a place for these, but this problem needs working out by further excavation. These double retaining-walls commence only about 50 or 60 feet back from the front of the *auditorium*, and the single wall, which serves on each side as far as that point, is finished with a broad raking coping.—*Builder*, June 14.

THE STAGE IN THE GREEK THEATRE.—Now that excavation is stopped for the summer it is possible to give an indication of our results. As to the stone to the north of the river, the sepulchral mound, the altars, *etc.*, there is little to add to what has been already reported. But the importance of our discoveries in the theatre can be better appreciated now that the plan is fairly clear. The plan of the theatre, its front benches inscribed with the names of Arcadian tribes, its water-channel, and other arrangements, have been described in previous reports; but the evidence as to the existence of a stage and its relation to the orchestra is what will be looked for with most interest. A publication with plans and sections will not be made until some doubtful points of detail have been ascertained by further digging; meanwhile, a brief statement of our very important results will not be premature. I make this statement on the authority of the plans and measurements of Mr. Loring, who superintended the work.

The controversy as to the existence of a raised stage in the fifth and fourth centuries has been very vigorous recently; and Dr. Dörpfeld's review of Mr. Haigh's *Attic Theatre*, with the other discussions in the *Classical Review*, has given it a new impetus. It will be remembered that, in various theatres with remains of the stage-buildings of Greek period, there has been found facing the orchestra a row of columns which have their bases on a level with the orchestra, and are with their entablature ten to fourteen feet in height. This, or some trace of it, has been found at Epidauros, at Oropos, at Athens, at the Peiræus, at the theatre in the Valley of the Muses. The question arose, whether the actors had their place on the level of the orchestra, with these columns as a background, or on a stage supported by the columns, and widely separated from the chorus in the orchestra. It must, however, be observed that this row of columns in no case goes back to the fourth century. At Athens, the stage-buildings of Lykourgos consisted only of an oblong block with projecting wings, between which a temporary stage could be erected—the row of columns was much later. At Epidauros, Dr. Kawerau, who speaks with authority, says that the column-front was a later addition, the original fourth-century structure being a mere oblong building, in front of which a temporary stage could be erected. At Oropos, the proscenium with columns is proved by the inscription not to be much earlier than Roman times, nor can the other two instances claim any higher antiquity.

As to the stage, then, as distinguished from the oblong building that formed its background, we had no evidence of good period before the excavations at Megalopolis. Now, at Megalopolis, we have a stage almost certainly contemporary with the building of the theatre. It consists of a back wall with three doors about 6 ft. above the level of the orchestra, and a thick parallel wall in front, which formed the front of the stage, probably made, like the orchestra, of levelled and beaten earth. Probably the stage was about 5 ft. above the level of the orchestra; and along its whole front and sides is a flight of steps descending to that level, thus affording easy communication between actors and chorus. The stage was 20 ft. broad. Here we have, for the first time, a fourth-century stage, probably similar to those on which the great works of the Attic drama were first acted. In Hellenistic times, the high narrow stage of Vitruvius, supported on columns, may have become usual. At Megalopolis there is also a Roman stage supported on columns, but quite separate from the Greek one.

A stage such as has been found at Megalopolis is a natural development from the cart or table on which the primitive actor mounted to make himself visible and audible above the chorus. Such stages were usually temporary and made of wood, but by a fortunate accident that at Megalopolis was of stone, and so survives to show what its predecessors were like. The

controversy is thus restricted to the use of the stage-buildings constructed in later Greek times, and so is of little importance for the drama in the fifth and fourth centuries.—ERNEST GARDNER, in *Athenæum*, Aug. 2.

EDICT OF DIOCLETIAN.—An inscription, some 250 lines in length, which was found in the possession of one of the villagers, and copied by both Mr. Kastroménos and myself, proves to be part of the famous Edict of Diocletian, fixing maximum prices throughout the empire. More than half of the fragment of Megalopolis is new. The new portions fall for the most part under the following headings: [Περὶ] τῶν μισθῶν τῆς βεκτον[ο]ύης (fares), Περὶ χορτῶν (fodder), Περὶ πλούμων (feathers of various birds), Περὶ καλὰμων καὶ μελανίου (pens and ink), Περὶ ἐσθήτων (clothing), [Περὶ ἐρείας] (wool), Περὶ λίνου (linen). Besides these portions, many obscure or fragmentary lines in Lebas and Waddington (1870) and the *Corpus Inscriptionum Latinarum* (1873)—in which all the fragments, Greek and Latin, up to date of publication, are pieced together—will be cleared up or restored by the new fragment, which we hope to publish in the next number of the *Journal of Hellenic Studies*.—W. LORING, in *Athenæum*, Aug. 23.

MYKENAI.—Dr. Dörpfeld notes some of Dr. Tsountas' more recent discoveries on the akropolis at Tiryns. The freeing of the southernmost walls of the citadel gave nothing of architectural interest. But on the s. w. a deep rocky way was found which was apparently connected with the water-supply of the citadel. On the very summit, through damage to a portion of the foundation of the Greek temple, a hitherto-unknown part of the vestibule to the Megaron was uncovered. The walls of the royal house are here in excellent preservation, and are formed of quarried stone joined with clay and a few courses of stone slabs. In one corner of the vestibule, the wall-facing with its painting is still preserved, and we recognize here the same stripes, with diagonal lines of different widths, that occur several times at Tiryns, e. g., on the piece of wall-facing with the well-known bull.—*Athen. Mittheil.*, xv, 2, pp. 232-3.

PARAMYTHIA=PHOTIKE.—At Paramythia, in Epeiros, has been found a Latin inscription in honor of Sextus Pompeius which shows that to be the site (hitherto uncertain) of the city of Photiké.—*Athenæum*, June 28.

PEIRAIEUS.—Amongst the sepulchral stelai, bearing inscriptions and sculptures in relief, recently found at the Peiræus, is one inscribed to a certain Secunda Servilia, daughter of Publius, married to an Athenian. The deceased is represented seated and clothed in the *chiton poderes* and *himation*, and before her stands a little girl holding in her left hand a box closed, and in her right a fan, she also being clothed with the *chiton poderes*, over which is the *epiblema*.—*Athenæum*, June 14.

SLAVOCHORI.—**PREHISTORIC TOMBS.**—Between Slavochori and the hill of Haghia Kiriaki, where it was supposed that the temple of the Amyklaian

Apollon was placed, a little south of the hamlet of Godena, Dr. Tsountas has discovered two tombs supposed to be of the same period as the neighboring one of Vaphio. It is true that they are not domical but are dug in the rock, like those explored at Nauplia and Mykenai. They appear to be intact and will be carefully explored.—*Revue arch.*, 1890, i, p. 273. *Cy.* vol. v, p. 379.

TROEZEN.—In the tombs which were opened here last year by Ephor Staïs, there were found some vases of Mykenanian style, and a curious gold band with geometric decoration, a bird and a *crux gammata* (Δελτιον, 1889, p. 164). The same exploration brought to light a fragment of an archaic relief on which a nude female is seen seated on a horse.—*Revue arch.*, 1890, i, p. 275.

The French School are excavating in the Eparchy of Troezen, and report the discovery of the remains of an ancient temple and of some sculptures.—*Athenæum*, June 28.

VAPHIO.—**DESCRIPTION OF THE GOLD CUPS.**—It may be well to give here a brief description of the scenes in *repoussé* on the gold cups so often mentioned (*cf.* vol. v, pp. 381, 494). They are drinking-cups with handles. In each cup an interior plate or lining, bent over the edge of the outer beaten plate, makes the inside of the cup plain and smooth. On the first cup (height, 0.083 m.; diameter at the top, 0.098 to 0.104 m.; weight, 276 grammes) are represented three bulls: the one at the right is running rapidly toward the right (*i. e.*, the handle of the cup); the middle one is caught in a strong net and overturned (the ends of the net are fastened to trees which may be olives; the other two trees on the cup appear to be palms); the third bull is rushing violently toward the left (*i. e.*, the handle); he is in the act of tossing a man upon his horns, and another man is falling upon his back by the side of the bull. This represents the active fight. The second cup gives the peaceful scenes that follow man's supremacy. Its height is 0.08 m., upper diameter 0.104 m., weight 280.5 grammes. Four bulls appear: the first, at the left, with head raised and open mouth is walking toward the left: about his left-hind foot is a stout rope held by a man who follows; behind the man are two bulls standing peacefully together, apparently in interested conference, the face of one is being turned toward the spectator *en face*; from the right, a fourth bull, with his head down, walks quietly up. Two trees, the species of which cannot be determined, appear behind the first and before the fourth bull. On both cups the uneven ground is indicated, and above the figures appear uneven masses which may represent clouds or other background. The first cup has, besides, a plain rim or frame above and below the representation. There are some faults in the drawing of the figures, but they are lively and characteristic. The men are slender and angular in shape, but muscular. They have long

hair and wear nothing but a heavy belt that sustains on either side a small apron-like projection. Their feet are shod with boots slightly raised at the points and rising with sandal-like strips to the middle of the calf. These cups excel all known works of the Mykenian epoch.

ITALY.

PREHISTORIC AND CLASSIC ANTIQUITIES.

SYNCHRONISM OF THE TERREMARE AND THE MYKENIAN TOMBS.—The researches of Unset have proved, that the inhabitants of the *terremare* were acquainted with the use of the *fibula* (*Bull. palet. ital.*, 1883; *Zeit. f. Ethnol.*, 1889, art. *Zu den ältesten Fibeltypen*). It is an interesting fact that Tsountas has discovered, in two archaic tombs at Mykenai, two *fibulae* of a type identical with these of the *terremare*. This would lead to the identity in period of the two civilizations, at a date corresponding about to the XII century.—Orsi, in *Bull. Palet. Ital.*, 1890, p. 20.

ANVERSA (Paeligni).—**NEOROPOLIS.**—In working at the road leading from Sulmona to Scanno on the territory of Anversa, above Fonte Palacchio, a series of tombs with sand-crypts have been discovered. The several points at which they exist proves this to be a necropolis of considerable importance.—*Not. d. Scavi*, pp. 129-30.

AREZZO=ARRETIIUM.—**A NEW MANUFACTORY OF BLACK AND RED WARE.**—In ancient times, Arretium was a great centre for the manufacture of ceramics, and their vestiges remain within and without the city. A further proof of this has been given by a discovery made about one kilometre outside the Porta Fiorentina, at a spot called *Orciolaia*, a name that is very apt, and must have come down from Roman times.

Near the Porta Fori is the famous manufactory of *Marcus Perennius* (*Not. d. Scavi*, 1883, 1885), in which were made the most delicate and artistic pieces of ceramics in the coral-like red ware that became fashionable after the fall of the black ware, and which is generally termed Aretine ware because the potters of Arretium were the foremost in making it. Outside the Porta San Lorentino was the manufactory of *Lucius Calidius*, a contemporary of Perennius. On this same road, beyond the Ponte del Castro, are the fields of the *Orciolaia*, where the ceramic industry flourished with especial activity. Near the bridge was found a vase with the name of *Lucii Titii Thyris*, who had a potter's establishment w. of the city at Fonte Pozzuolo. In this neighborhood was excavated a building of quadrangular shape, with which was connected an open square with hard-beaten flooring for working at pottery in the open air. The water-conduit, the place for refuse pottery, and other details were discovered. In the refuse there were two strata, an upper one of red ware, and a lower one of black ware, showing how one fashion displaced the other, while the estab-

ishment continued to flourish. Among the many fragments discovered, the majority showed marks, monograms, initials, parts of words, that stood as distinctive marks or names of individual potters. Some were common to both the black and the red ware. For example, the potter *Dassius* produced both kinds. This manufactory therefore stands at a time of transition from one style to the other, during the close of the second and the first part of the first century B. C.

The artists' names recorded are sufficient proof that they were Greeks: ANTIOCHUS, CHARITO, CHATINUS, DASSIUS, HEC(*tor*), HILAS, LUS(*ias*), NICEPHOR(*us*), PAMPHILUS, STEPANUS, TRUPHO. These men worked together and signed their works without adding the name of any master or owner: this means that they formed a society or *sodalitium* on their own account—a coöperative establishment. They were Greeks, but must have come from a Greek land where Latin script was used, e. g., Campania. This fact is an indication that the industry was not one peculiar to Arretium, but was imported. This is rendered probable by the very few examples of black Etruscan ware found here (and these probably imported from Chiusi), and by the fact that Arretium imported Etrusco-Campanian ware, and became, early in the third century B. C., the seat of several manufactories of such ware. The industry, having thus been imported from Campania into Arretium, was fed by the constant arrival of Greek artisans.

It is interesting to discuss the question of the exact time when the bright coral-red ware with decoration in relief succeeded the black ware. There are but two methods of proof: one paleographic, the other, the earliest use of red ware in Arretium. From the manner in which the names ANTIOCHUS, NICEPHOR(*us*) are written, we recognize that black vases were still made after 640 U. C., because, before this date, the *ch* and *ph* were not used. On the other hand, there is abundant proof that the red ware was in use before Sulla, i. e., before 670 U. C. This gives the years at the close of the second and the beginning of the first century for the beginning of the red ware.—G. F. GAMURRINI, in *Not. d. Scavi*, 1890, pp. 63-72.

BOLOGNA=FELSINA.—ITALIC TOMBS.—Four Italic tombs have been casually found outside the *Porta S. Isola* in what was formerly the De Lucca property. Under the last were objects belonging to a fifth tomb, containing a fictile ossuary of the Villanova type decorated with scratched meanders and pressed concentric circles. It contained a *fibula* of serpentine shape and peculiarly delicate decoration. Its two arches are joined by fine bands and strings of silver, which form an open-work of sinuous lines. There were numerous objects in bronze, and fragments of a fictile vase apparently in the extraordinary shape of a bull surmounted by a duck.—*Not. d. Scavi*, 1890, pp. 104-6.

BREMBATE-SOTTO.—PRE-ROMAN NECROPOLIS.—In vol. v, p. 109, was given an account of the discovery of a pre-Roman cemetery at Brembate-Sotto, between Osio and Trezze, belonging to the first iron-age. Since then, systematic excavations have been undertaken, the results of which are reported by Sig. G. Mantovani in the *Notizie degli Scavi*, 1890, pp. 52-63, 96-103. The contents of fourteen tombs, consisting of 235 objects or groups, are described. Most of them are of the ordinary style, and call for no comment. Among the bronzes are a large *situla* of beaten bronze-plate, used as a cinerary urn; another vase of similar workmanship; an *olpe*, like some discovered in the excavations of the Certosa (Bologna).

In *Tomb XI* was a magnificent oinochoë made of heavy bronze-plate: it is decorated with a graceful palmette from which spring two serpents, as on similar objects from the Certosa (ZANNONI, t. cxxxx, 12) and Marzabotto (GOZZADINI, *Marzabotto*, t. xv, 5; xvi, 2, 4). In *Tomb XII* was a small serpent of cast bronze, probably the *genius loci*. This tomb is rich in interesting pieces: a *situla* of plates of bronze nailed together; two decorative wheels; seven circular pendants with a little silver *olpe* attached decorated with light horizontal lines in relief; a large number of other pendants of similar character, of rings, buttons, gold strings and little plates; an elegant brass *kyathos* with linear decoration in *graffito*. It is interesting to note that the cinerary *situla* of *Tomb XIV* still contained the cloth enveloping the burnt bones and sepulchral furniture.

COLONNA.—ROMAN SCULPTURES.—In his property east of Colonna, Sig. E. Ciuffa has brought to light a number of marble sculptures. The most interesting are: (1) statuette of a bearded satyr, his head covered with a tiger-skin; (2) a hermaphrodite, under life-size, headless and draped in the upper part; (3) head of Venus; (4) archaic head of Apollo, of good work; (5) head of Bacchus, larger than life; (6) two iconic heads, male and female, etc.—*Not. d. Scavi*, 1890, p. 89.

CORNETO=TARQUINII.—NEW DISCOVERIES IN THE NECROPOLIS.—Excavations were again begun, February 10, on the site referred to on p. 222 of this volume. They were carried from a point 100 met. from the *tomba delle bighe* up to this tomb itself. The first one opened was a chamber-tomb (*a camera*), despoiled and with roof broken in: in it was found nothing but a carnelian scarab on which was the figure of a nude warrior (probably Kapaneus) ascending with torch and shield. At a distance of 10 met. was a trench-tomb (*a fossa*), covered with a slab, containing an unburned skeleton, seven pieces of Greek ware with dark bands on light ground, two cups of black *bucchero* with horizontal handles, and two gold pendants. 15 met. west of this tomb was a chamber-tomb with a herring-bone vault (*a schiena*), measuring 2.05 × 1.95 × 2. metres, already despoiled. Among scattered bones were found eight pieces of Greek ware and one hand-made

cup resembling those from the *well* and *trench* tombs. Of the pieces of Greek ware the most interesting is a pitcher whose decoration of brownish-red on a yellowish-white ground consists of triangles, narrow zones, and a broad zone on which are depicted four fish.

Feb. 12. Some trial trenches were dug on the Manterozzi plateau, about 50 met. west of the *tomba del Barone*. A chamber-tomb was found, with vault broken in and anciently despoiled. Among the *débris* were fragments of a black-figured *amphora*, a scarab with a man adoring a lion or a panther placed on an altar, etc. From this date up to Feb. 21, four tombs were uncovered, one a trench, the others chambers. The trench-tomb contained an Attic *amphora* of very severe red-figured style, with twisted handles. On one side are an *ephebos* and a boy talking and gesticulating. On the other is a second *ephebos* wrapped in a mantle and leaning his right arm-pit on a staff, speaking with right arm extended. This is the first Attic vase found in a trench-tomb, and shows it to be among the latest of its kind. A mirror found here presents a style of *graffito* earlier than those of the Etruscan necropoli.—*Not. d. Scavi*, 1890, pp. 74-7.

FIRENZE = FLORENTIA.—Many minor discoveries of no moment have been made, but among these an epigraphic discovery stands out as of peculiar importance for the history of the city. It reads: GENIO COLONIAE | FLORENTIAE | . . . T . DIVS | . . . CVS | . This is a confirmation of the fact that Florentia was a Roman colony. Up to the present, there had been but one piece of epigraphic evidence (*CIL*, xi, 1617) which names a COLON(us) ADLECT(us) D(ecreto) D(ecurionum) FLORENT(inorum). The present inscription is in fine and clear characters of the first or second century.—*Not. d. Scavi*, pp. 108-10.

FONTANELLA DI CASTELROMANO (Prov. of Mantova).—Signor Giacomo Locatelli has carried on excavations here with funds supplied by the Ministry of Public Instruction. He writes to the *Bull. di Palet. Ital.* (1890, pp. 50-1): "In my excavations in the territory of Fontanella, I discovered two distinct necropoli: the first and earliest is indicative of the *eneolithic* period, to which belong the tombs of Cantalupo and Sgurgola in the Roman province, the second belongs to the period of transition from the bronze age to the first iron age, and reminds more especially of the necropolis of Bismantova. In the first necropolis, which is for inhumation, I found seven well-preserved human skeletons with accompanying furniture; in several tombs, on the other hand, the skeletons were consumed, but the furniture was preserved. It consisted of superb poniards, various flint arrow-heads and ax-heads, a coultter of stone, and a pin of copper or bronze, 4 cent. long. The skeletons were lying on their left side, with legs curled up, turned to the east, the head to the west; in one case the legs were contracted up to the breast.

"Among other bronze objects found in the second necropolis are to be noted arched fibulae, of the Bismantovan type, hairpins, razors, knives; also bones with decoration and earthen urns of various forms, some with delicately incised designs. A special tomb was also found with an earthen urn *a cordoni* lying with its mouth to the N. and its perforated bottom to the S.; against the whole was a cylindrical terracotta vase also with a decoration *a cordoni*, c. 25 cent. long, and on the E. side was a human skull and a rude earthen glass."

NAPOLI.—In the area of the same ancient cemetery which yielded, a few months before, the inscription of C. Eclanius Fortunatus (*Not. d. Scavi*, 1889, p. 404), an important inscription was discovered on Jan. 2, made in honor of P. PLOTIUS FAUSTINUS SCRIBA PUBLICUS NEAPOLITAN(orum) AEDILICIUS. It is in both Greek and Latin, as are other Neapolitan inscriptions (*CIL*, x, 1481, 1489, 1490, 1494, 1497, 1504), and contains, in the Greek portion, the decree of the Neapolitan senate regarding the honors to be rendered to the deceased. The text will be published in one of the next numbers of the *Monumenti* of the *R. Accademia dei Lincei*.

PARMA.—**THE PALAFITTA OF THE TERRAMARA.**—The *palafitta* of the *terramara* within the city of Parma was discovered, excavated, and illustrated in 1864. It is notable for being constituted of two strata of piles, so as to form two *palafitte*, one above the other. The objects found were of stone, bone, wood, and clay: none were of bronze. During the past winter, in demolishing the bastion of San Benedetto, the workmen found in the earth two bronze objects, a lance-head, and a common knife-poniard. These are objects often found in the *terremare*, and lead to the conclusion, that the *palafitta* of Parma (1) extended twice as far to the N. as was supposed, and (2) contained bronze objects.—*Bull. Palet. Ital.*, 1890, p. 53.

POMPEII.—**DISCOVERY OF WALL-PAINTINGS.**—Some mural paintings of more than ordinary interest have recently been disclosed. In *Reg. VIII*, between Nos. 16 and 21 of *Insula 2*, *Via III* and *IV*, the remarkable discovery has been made of a house five stories high. The upper floor, which is entered from the higher level formed by a mound of prehistoric lava, is profusely decorated, and the principal hall displays on one wall the myth of Bellerophon, a nude figure who, holding with one hand the bridle of his horse, is in the act of receiving the letter and orders of King Proitos, who is seated on a throne before him. The lower part of the house, looking toward Stabiae and the sea, was used as a bathing establishment. Three steps lead into the *frigidarium*, which is perfect, the lower part of the surrounding walls being painted blue, and the upper red. The middle of the right wall is occupied by a picture representing a nymph, semi-nude, borne over the waves on a sea-horse. The horizontal band dividing the blue from the red surface is a kind of frieze of comic or caricature scenes, represent-

ing dwarfs and pigmies fighting with various animals in scenery evidently of the Nile country. One dwarf is in the act of throwing a large stone at an ibis; while another is trying to save, by drawing to the land, a figure (probably a woman) fallen into the river, when, seized himself by a crocodile, he has tied himself with a rope to another dwarf, standing behind, who is striving with might and main to prevent his comrade from being drawn down into the water.—*Athenæum*, July 12.

POZZUOLI.—ROMAN BATH.—Some buildings uncovered here near the Villa di Cicerone belong to a Roman bath. The interior of one of the halls was decorated with columns; two rooms were decorated with frescoes representing figured compositions, scenes of *genre* and still life with birds and fruits, landscapes, and sea-views. Underneath these rooms are others, all covered with tunnel-vaults.—*Not. d. Scavi*, 1890, pp. 122-4.

REGGIO=RHEGION (Calabria).—PRIMITIVE CERAMICS.—Certain work in the port of *Reggio di Calabria* brought to light some primitive ceramic objects which are, without doubt, anterior to the foundation of the Chalkidian colony in the VIII century B. C. Nothing is known of the archæologic stratum in which they were found, and the greater part of them have been destroyed. Paolo Orsi describes the few that have been preserved in the local museum. They are all of black ware, some ruder than others. The earliest are of extremely primitive workmanship: the later vases are similar in form and technique to corresponding ones found in the *terremare* but are smaller and more elegant. They are up to the present the only record of a pre-Hellenic settlement at Rhegion.—*Bull. Palet. Ital.*, 1890, pp. 48-9.

ROMA.—THE COLLEGE OF HARUSPICES OR SOOTHSAYERS.—The Etruscan science of divination was represented especially by the *haruspices*, who resided at first entirely in Etruria and did not come to Rome until quite late. They formed a part of the civil rather than the religious administration. In many places they were organized into a club or *collegium* with a president. Such a society was known to have existed in Rome, and was thought (from a passage in Tacitus) to have been organized by the Emperor Claudius, and, arguing from several inscriptions, to have been composed of sixty members. An inscription recently found near the Via Salaria, cut on a *cippus* of travertine in letters characteristic of the close of the Republic or the first decades of the Empire, shows conclusively that already, before the time of Claudius, the *haruspices* of Rome formed an order with sixty members, and that this Emperor therefore merely reorganized, on a new basis and under the supervision of the *pontifices*, this ancient science of divination. The inscription reads: L·VINVLLEIVS·L·F·POM·LVCVL·LVS|ARISPEX|EX SEXAGINTA. It comes from the early Salarian

necropolis so often mentioned during the last four years.—*Bull. Comm. arch.*, 1890, pp. 140-43.

THE LIMITS OF THE FOURTEEN REGIONS OF AUGUSTUS.—In view of the constant disputes regarding the limits of the fourteen regions of Augustus, Professor R. Lanciani has undertaken to determine their boundaries with greater precision than has yet been done. His study is published in the *Bull. Comm. arch.* for May (1889, pp. 115-37), and is accompanied by a diagram and a map. He starts from the hypothesis, that Augustus made a conventional division, following a cardinal line almost due north and south, along the Via Flaminia, surrounding the east base of the Capitol, the west base of the Palatine, and taking the line of the Via Appia. One of the characteristics of this division was the attempt to make it of equal parts, each region containing originally a perimeter of somewhat under or over twelve thousand feet, except the sixth which was made larger on account of its sparse population. The average number of blocks or *insulae* assigned to each was three thousand. The division was determined by two main elements: the Servian Wall, and the main streets leading from the centre to the gates and following to the bottom of the valleys between the hills. A detailed examination is made of the catalogues more recent than the time of Augustus, and then follows a discussion of the exact confines of each region.

TERRACOTTAS.—The excavations in the Campo Verano have brought to light further pieces of terracotta reliefs. (1) Three fragments of a frieze with sacrificing Victories, of severe style. (2) Fragment with the figure of a hunter carrying a lance and accompanied by a dog. (3) Five other fragments with figures of *hierodulae* dancing around an idol of Minerva.

In working at the drain near San Crisogono was found a fragment of a frieze entirely different in style from the above: it is modelled with the stick, in very high relief and in magnificent style. There remains a figure of a man, headless and partly armless and legless, of a Seilenos type, in lively motion.—*Bull. Comm. arch.*, 1890, pp. 148-9.

A HERM OF HERCULES.—The construction of a drain on the old street of Porta Salaria brought to light an interesting piece of sculpture. It is a marble herm of Hercules, slightly under life-size. The lower half of the figure ends in a diminishing shaft whose feet are broken off. Above, the god is entirely covered, with the exception of his head, by the lion-skin arranged in a few stiff folds, with the legs hanging down the left side: the right hand, enveloped in the skin, is placed on the breast; the left, also covered, holds the *clavus*. The head is bearded and of the Lysippian type. There are traces of color on the lion-skin.—*Bull. Comm. arch.*, 1890, p. 148.

SCULPTURES ON THE VIA CAVOUR.—Among the pieces of sculpture found in lengthening the Via Cavour are: (1) a marble bracket formed by a head

of Medusa of the pathetic Hellenistic type with dishevelled hair and half-closed eyes; (2) a half-head of a child, life-size, belonging to the third century A. D. and of excellent workmanship, representing an Egyptian.—*Bull. Comm. arch.*, 1890, pp. 181-2.

NUMISMATIC DISCOVERIES AT AND NEAR THE CITY.—Several numismatic discoveries have taken place in and near the city. On the Esquiline, toward the Suburra some six thousand common bronze coins of the fourth century were found in a brass vase. At PORTO D'ANZIO there came to light two libral *As* with the head of Apollo repeated on both sides and belonging to the series assigned by P. Garrucci to the Sabines (t. XXXIV). At CIVITA CASTELLANA in a tomb at a depth of twenty metres there was found, by the side of two bronze statuettes, a fine example of the triens of the very rare series of the *aes grave* of Tarquinii (GARRUCCI, t. XLVI, 3). Among individual finds in ROME is an inedited new gold quinarius of Probus, medals of Constantine and Alexander Severus, a fine large bronze of Emilianus and one of Antinous.—*Riv. Ital. Numis.*, 1890, pp. 317-18.

TERMINAL CIPPI OF THE TIBER.—On the right bank of the Tiber (Prati di Castello), in front of the Antaldi and Menotti houses there has come to light a notable series of ancient travertine *cippi* relating to the limits of the river-banks. They are thirteen in number, five without and eight with inscriptions. Of the latter, seven belong to the delimitation made by Augustus in 747 U. C.; and one records that made by Trajan in 101 A. D. They were all found in place over an extent of about a hundred metres: hence the particular importance of the discovery, which enables us to study and recognize for quite a distance along the right bank of the river the details of the work undertaken by Augustus to guard the rights of the State. A plan is given of the position of each one, as well as a detailed description. The inscriptions of Augustus are all worded alike: IMP · CAESAR · DIVI · F | AVGVS TVS | PONTIFEX · MAXIMVS | TRIBVNIC · POTEST · XVII | EX · S · C · TERMINAVIT. The only difference is in the formula giving the distance between the *cippi*, which vary between 15 and 148½ ft.; for example, R · R · PROX · CIPP · PED · XXIV.

There are one or two holes in each *cippus*, and these, together with the leaded clamps found on them as well as in the pavement, show that the *cippi* were joined by iron railing which shut out the space toward the river. Nine other such *cippi* of Augustus were already known, all of 747 U. C., and belonging also to the right bank, nearly all having been found near the castle of S. Angelo. The great differences in the distance between the *cippi* and their irregular lineation are signs of irregularities of the ground and the presence of private buildings that could not be appropriated. A new and interesting fact is, that the direction of the line between each *cippus* and the relative position of the next *cippus* are indicated by the side

on which the distance is inscribed; this being not always on the front but sometimes on the side and even on the back. The linear extension of any tract along the river-banks is therefore indicated only by the inscriptions along the front of the *cippi* to the exclusion of the others.

An attempt is made to verify, by means of the distances marked on these *cippi*, the measurement of 0.2963 met. attributed to the Roman foot; and the result, though partial, is decidedly in favor of this measure. The general conclusions are as follows: (1) the *cippi* are travertine parallelipeds surmounted by a semicircular cap, and measure $2 \times 2.50 \times 0.70$ metres. (2) They rise 1.10 or 1.20 met. above the surface; and (3) are planted at the corners of the perimeter of the public property in such a way that the apex of each angle of the perimetral line coincides with one of the outer angles of the *cippus*. (4) The placing of the *cippi* followed the course of the river, so that the distance between two *cippi* was always noted on the lower of the two. (5) The inscription giving the date of the limitation is always incised on the side facing the extension of the property limited. (6) On each *cippus*, the distance from the next one is indicated, and the spot on which this is inscribed indicates the direction of the next section of the polygonal line, and consequently determines the position of the next term. (7) The real measure of distance should be calculated on the line of the projection of two consecutive *cippi*.—*Not. d. Scavi*, 1890, pp. 82-8.

SCHIAVONIA.—STELE WITH EUGANEAN INSCRIPTION.—A *cippus* of hard trachyte, found in Schiavonia (part of the commune of Este) and shaped like a truncated pyramid, has upon one of its four faces a zone inscribed with Euganean characters enclosed within incised lines. This pyramidal stele should be numbered among the inscribed stones of the most advanced Euganean culture.—*Not. d. Scavi*, 1890, pp. 51-2.

TIVOLI.—ANCIENT NECROPOLIS.—Near the Villa d'Este, have recently been found some tombs which prove, for the first time, the existence in this locality, the highest point in Tivoli, of an ancient necropolis. In one of the tombs was a small two-handled Etrusco-Campanian vase with a painting in reddish ocre representing two *epheboi* in the usual style of the third century B. C.—*Not. d. Scavi*, 1890, pp. 122-3.

CHRISTIAN ANTIQUITIES OF ITALY.

THE DATE OF THE RENAISSANCE.—At a meeting of the *Soc. des Antiquaires* (Dec. 18, 1889) M. GUIFFREY called attention to four gold medallions of Italian workmanship, representing Roman Emperors, which are mentioned in the inventory of the jewels of the Duc de Berry, and which he is about to publish. The Prince purchased them in 1402 of merchants from Italy: they now belong to the *Cabinet des Médailles*. M. COURAJON remarked the importance of the date of the medals, because, at the time of their execu-

tion, Italian art had not yet turned to the study of the antique.—*Ami des Monuments*, 1890, pp. 49-50.

ARCEVIA.—**PAINTING BY LUCA SIGNORELLI.**—Sig. A. Anselmi gives, in the *Archivio storico dell'Arte* (1890, pp. 157-8), a note on an important painting by Luca Signorelli of which all trace had been lost since 1810. Up to that time, it had been preserved in the church of San Francesco at Arcevia, for which place the painter executed a number of works. It was among the works of art seized by the French in 1810 and never returned. It represented the enthroned Virgin holding the Child, and having on one side SS. Simon and Jude, on the other SS. Bonaventura and Francesco. Below was the inscription in gold letters: JACOBI SIMONIS DE PHILIPPINIS AERE | DEO ET B. V. DICATUM | FR. BERNARDINO VIGNATO | GUARDIANO PROCURANTE MDVIII.

FIRENZE.—**TWO PAINTINGS RESTORED TO PIERO POLLAIUOLO.**—In the church of Santa Croce, at Florence, near Donatello's tabernacle with the Annunciation, is a fresco, by a master of the *quattro cento*, representing SS. John and Francis, which has been attributed until now, on the faith of Vasari, to Andrea del Castagno, though quite recently Morelli and Bayet have suggested the name of Domenico Veneziano. An anonymous ms. of the XVI century in the Uffizii gallery entitled *Nota delle tavole di pittura e figure di marmo di eccellenti maestri che sono in Fiorenza*, this work is attributed to Piero Pollaiuolo, with these words: *S. Giovanni B.^{te} con S. S. Franc.^{co} in fresco nel muro a man destra della cappella de' Cavalcanti, del Pollaiuolo, eccellente maestro, maniera del S. Bastiano de' Pucci nella Nuntia.* This painting of S. Sebastiano here referred to is attributed to Piero Pollaiuolo by Albertini.

Another painting that should be restored to this master is a male portrait exhibited at the Uffizii as No. 30 under the name Antonio Pollaiuolo. By comparison with a portrait of Galeazzo Maria Sforza copied by Cristofano dell' Altissimo, at the request of Cosimo I, from an original in the Museo Giovinio, this painting also is shown to be a portrait of this Milanese duke. Its attribution to Piero Pollaiuolo is then made certain by the inventory of Lorenzo de' Medici published by M. Müntz, which speaks of a *quadro dipintovi la testa del Duca Galeazzo di mano di Piero del Pollaiuolo*: it is further referred to in the inventory of the Palazzo Vecchio, compiled in 1553, as: *uno ritratto in tavola d'un duca di Milano con ornamento dorato et vesta piena di gigli dorati.*—U. Rossi, in *Arch. stor. dell'Arte*, pp. 160-1.

PRATO.—**FORGOTTEN WORKS BY NICCOLÒ D'AREZZO.**—The sculptor, Niccolò di Piero Lamberti is known to hold an important place as one of the precursors of and earliest coöperators in the Renaissance. His known remaining works are very few, and it is all the more interesting to call attention to two works which by documentary testimony are known to be his.

I. The façade of the cathedral of Prato shown to be his by the *Libri degli Operai* of this church, as published by CESARE GUASTI, *Il Pergamo di Donatello*, p. 12, where we read that, before 1413, *Niccolò di Piero chiamato il Pela di Firenze e i suoi compagni Giovanni di Donato e Lorenzo di Matteo da Fiesole hanno tolto a fare la faccia dinanzi della pieve*. It is to be conjectured that the design of the façade, as well as its execution, was by him.

II. The second work is the sepulchre of Francesco Datini, whose life is given through the correspondence of the Florentine notary Iapo Mazzei, also published by CESARE GUASTI, *Lettere di un notaro a un mercante del secolo XIV*. Here are given the accounts of the sums expended from Jan. 3, 1410, to Aug. 16, 1412 for the monument of Datini, whose reclining figure and the frieze containing the inscription were entrusted to Niccolò. This tomb still remains in front of the high altar in San Francesco. The figure, of good proportions, is surrounded by a Gothic niche.—*Archivio stor. dell'Arte*, 1890, p. 161.

VENEZIA.—FOUR PAINTINGS BY CRIVELLI.—The Gallery in Venice has received four small tempera paintings by Carlo Crivelli, of whom it had previously had but one example. They came from the Pericoli sale in Rome and previously from the D'Aste collection of Genova. They represent the standing figures of Saints Roccus, Sebastianus, Emidius and Bernardinus. These four pieces must have belonged to a polyptich and been placed on either side of a large central composition. In style they belong to the painter's latest period, about 1490. The inscription, OPVS CAROLVS (sic) CRIVELLI VENETI, is apparently a bad copy of the original inscription.—*Arch. stor. dell'Arte*, 1890, pp. 158-9.

SARDINIA.

TERRANOVA FAUSANIA.—PREHISTORIC TOMB.—Excavations on this site in the territory of Olbia brought to light a tomb of unusual interest and evidently of great antiquity. It was of very oblong oval shape; the walls were formed of accumulated loose stones arranged with a certain symmetry and not rising to any great height. Three exfoliated rocks, whose interstices were filled with small stones, were laid flat upon the edges of these rough walls, thus closing the tomb. The flooring consisted of roughly arranged stones imbedded in the earth. Within, beside human bones, was a rude vase of blackish ware, made with the lathe, with slightly curving walls, somewhat projecting mouth, and without handle: fragments of other similar vases lay about, also a thin strip of bluish flint with well smoothed surfaces and obliquely cut edges.—*Not. d. Scavi*, 1890, pp. 92-3.

PREHISTORIC CONSTRUCTIONS.—Sig. Tamponi reports in the *Not. d. Scavi* (1890, pp. 130-1) some prehistoric discoveries in the territory of ancient Olbia. In the highest part of the region of *Pedra Zoccada* were remains

of a *giant's tomb* formed of rude masses of granite arranged in two parallel rows ten met. long and sixty cent. apart. The space between the rows formed the sepulchral chamber and was doubtless anciently covered with slabs, as in other cases in Sardinia.

At a short distance, at the highest point of the hill, are traces of a *quadrangular wall* around which were picked up several pieces of obsidian, as well as fragments of pottery of very primitive manufacture. On every part of this summit are to be seen stones belonging to destroyed constructions. Near by is a cavity, formed of two immense blocks of granite, and measuring over 15 sq. met., within which were found fragments of pottery and obsidian, indicating this to be a prehistoric station.

Traces of another prehistoric station exist at *Albitroni*, a picturesque elevation along the rocky chain of *Monte a Telti*, to the left of the Roman road from *Sbrangatu* to *Traissoli*. There have been found fragments of rude unturned pottery; flakes of obsidian; blocks of granite arranged in a certain order, as in the *nuraghes*.

SICILY.

THE PREHISTORIC ARCHÆOLOGY OF SICILY.—We here give the summary promised in our last number (p. 240) of Signor Orsi's two papers on the early archaeology of Sicily, in the *Bull. di Paleol. Italiana*. "Up to the present, the literature of primitive Sicilian archaeology has been exceedingly limited; not only that of the neolithic period, which is really prehistoric, but, even more, that usually attributed to the Siculi, which may be regarded as the transition from the prehistoric to the historic. By the Siculi, we have superb rock-cut necropoli, so imposing as to compare favorably with the most important groups on the mainland; we have megalithic monuments so little known that their existence even is denied by the majority; we have a family of vases which may be yet regarded as entirely new, with certain peculiar forms of geometric painting which establish a direct bond of union between Sicily and the East, at times anterior to the Greek colonization." The only writers who have attempted a study of the subject in any of its parts are Professor Cavallari, who confined himself to the topographic distribution of the necropoli and the type of the tombs; and two Germans, Messrs. Schubring and Holm, who attempted merely an enumeration, often erroneous, of the localities where the necropoli are found. Professor Cavallari is at present engaged upon a large and comprehensive synthetic work which will illustrate the various types of necropoli and their varied contents, with a comparative study of related Italic or extra-Italic monuments.

The great difficulty has been, until now, that the necropoli are empty and long since despoiled and that but few recent discoveries have been

made. Sig. Orsi has given in these papers notes on such discoveries as have come to his attention, by which alone the age and nationality of these necropoli can be determined; and he has added an attempt to interpret the few known elements of Siculan culture.

PANTALICA (*Herbessus*?).—At the junction of the river Anapo and its confluent the Calcinara, in the Monti Crimiti, rises, like an enormous bastion, the tableland of Pantalica, entirely isolated. Its greatest length is 1200 by 400 metres, and its elevation between 390 and 420 metres. The position is impregnable; the only weak point is on the west, where fortifications were erected including a wall constructed of regular parallelo-pipeds. The plateau was occupied by a city, or rather by a very primitive population, perhaps of shepherds, who appear to have lived in large caves and in cabins of cane-work or mud. If this be true, as would seem from the complete absence of traces of masonry, it is a fact of great interest. The conclusion is drawn by Sig. Orsi, that this was an inhabited centre even after the coming of the Greeks and Romans, and that its inhabitants were native Siculi, who, being protected by the inaccessibility of the site, preserved not only a certain independence but the habits and customs of their ancestors and the primitive form of habitation and sepulchre. Certain modifications were, it is true, introduced, such as the adoption of coinage from the Greeks, the use of more elegant vases, and the type of fortification. This fortification, already alluded to, is essentially Greek and has its prototypes in the Eurialean castle at Syracuse and the akropolis at Leontinoi. The former of these is the work of Dionysios I, and dates from 402 to 397 B. C., and this gives us a date for the fortifications of Pantalica. In 404 Dionysios led an expedition against Herbessus (*Diod. Sic.*, xiv. 7), where he kept a garrison, and this city has been, wisely in Sig. Orsi's opinion, identified with Pantalica.

The great Siculan necropolis is perhaps unique for its size. It was visited as early as 1555 by Fazello and excited his admiration. It contains perhaps some thousand sepulchral cells, grouped especially around the great N. E. spur. They appear to be of all periods, extending from the earliest pre-Hellenic to the Roman period. The type is of a trapezoidal or quadrangular door or rather window, followed by a very short *dromos* or corridor leading to the sepulchral chamber. The window is framed by several recesses that served to secure the closing slab, which in a few cases is double. In the few hypogeic cells which Sig. Orsi studied near by, the vault is not curved, as in the earliest type, but is flat, and the chamber is quadrangular instead of oval—contrary to the most archaic examples at Syracuse. This form is quite late. Sig. Orsi was not able to find a single unopened tomb.

The museum of Syracuse contains objects from the necropolis of Pantalica. Among these are three small bronzes—two poniard-blades and a decorated fibula—which are a cardinal point for the chronology of Pantalica. The poniards are of a very archaic type used in Italy (*terremare* and *palafitte*), through Central Europe, and in Greece, in the pure bronze age. In the first iron age, this type disappears and is replaced by that of the *lama a fiamma* or concavo-convex blade, of which also an example has been found at Pantalica. The two bronze poniards represent the earliest objects yet found at Pantalica, anterior to the Greeks and perhaps to the Phœnicians: a very moderate *terminus ante quem* would be at latest the xi cent. n. c., for the earliest tombs of Pantalica. This is all the more interesting, that the existence of a real bronze age in Sicily had not yet been satisfactorily proved.

In 1879, an intact tomb was opened and its contents deposited in the museum of Syracuse. It had an elliptical cell and a semicircular vault, thus placing it among the earliest examples. It contained three vases and a bronze knife, the rite being that of inhumation. The knife is of the type transitional from the lanceolated to the concavo-convex form, which was in use at the end of the bronze and the very beginning of the iron age, not only in Italy but in Central Europe, Greece and the East: examples were found at Hissarlik (second stratum) and Mykenai, while those in Kypros are of copper; and they also appear in a slightly more recent stratum at Idalion, and with Phœnician vases in other sites. This tomb, therefore, is at least as early as the most archaic Villanova period, almost contemporary with that of Mykenai and certainly earlier than the first Hellenic colonization.

During the winter of 1889, were carried on clandestine excavations resulting in the finding of fictile and bronze objects partly reproduced on pl. iv of the *Bullettino*. Their character is very primitive. That of the bronzes places them between the x and v cent. n. c., at a date almost coinciding with the arrival of the first Greek colonists (735–720 n. c.). This, therefore, settles approximately a second chronologic point in the history of Pantalica. Only systematic excavations, such as have not yet been conducted, can make any detailed and scientific conclusion possible.

TOMB OF MILOCCA.—South of the great port of Syracuse is a plain defended by a tower of the xvi cent., and from it called the plain of Milocea. On it is a necropolis formed of a curious type of tomb opened in the rock, and which might be termed a *compagna* and belong to the advanced Hellenic period. Here there took place, in 1871, a very important discovery of which hardly any notice was taken. It was that of a circular hypogeic cell in whose right wall was cut a *loculus* which contained six rude vases some of which were ignorantly destroyed. The cell had a circular oven-

roof and was preceded by a little *dromos*. This shape is extremely archaic. The vases are so important as to require special description: they are of two distinct manufactures and origin: the one, rude and of local make; the other, painted and imported. First in importance are two cups, one large, the other small, of calyx shape, of irregularly black earth, turned, the larger one having a high annular handle. The presence of such calyx-vases is not fortuitous but is a special characteristic of the Siculan necropoli: Sig. Orsi gives statistics of the types hitherto known, adding others that are inédited. The conclusion is drawn, that the calyx-vases with a body at times globular, at times expanding a *tromba*, either painted with geometric decoration or of rude technique with simple glaze, are a hitherto unnoted characteristic of the artificial sepulchral grottoes of the Siculi, which represent, chronologically, the intermediate stage between the close of the neolithic period and historic times: they are of such uniformity of type as to constitute a peculiarly Siculan type of ceramics. It is a plausible conjecture, that they are imitated from Oriental fictile or metallic vases. Such vases are found among the Mykenian ceramics, at Mykenai, Hissarlik, Tiryns, and in early Boiotian tombs. In fact, it is proved, by two more of these Milocca vases, that products of the Mykenian culture, which may have served as models, were imported into the island. These examples are small amphorae: one has three annular handles, is turned, painted a creamy-white, made of a pure pale-yellow clay foreign to Sicily, decorated with lines, bands, undulations, and palmettes in chestnut-brown. Both belong to the third of the four phases of Mykenian ware established by Furtwängler—that characterized by a colored decoration with brilliant varnish. To this phase belong almost all the vases of Ialysos, Nauplia, Haliki, Spata, and Menidi, and, as with it are at times mingled Dipylon vases, its close must have been preceded by the Doric emigration in the XI century. The date of XI-X cent. must therefore be assigned to the tomb of Milocca.

The situation of this tomb, in the plain instead of being cut in the rock, is another proof of the existence, all around Syracuse, of a circle of Siculan villages whose position is still indicated by tombs. One of the most important of these groups is situated in the Reale property near Scala Greca.

NECROPOLIS ON THE REALE PROPERTY.—Sig. Orsi cleared all the grottoes composing this small necropolis, but without much result in the way of contents, as they had often been despoiled. Architecturally, they are of early shape, being all a variation of circular or oval ground-plans, some being formed of a double cell beside the *dromos*. Twenty of these are described.

SYRACUSE A SICULAN CITY.—The conclusion is reached, that, as the modern Syracuse is surrounded, within a radius of from 3 to 6 kilom., with small archaic necropoli, this city, before being a Greek city (734 B. C.) or a Phœnician station (XI-X cent. B. C.), was a settlement of the Siculi; and that

these necropoli must have been abandoned toward the close of the VIII cent. B. C., through Greek hostility.

NECROPOLIS NEAR NOTO.—In 1886, three tombs were cleared, one of them being of extraordinary size. Among the fragments of pottery were some both of black ware with pressed geometric decoration of concentric circles and bands similar to the Villanova ware, and also fragments of vases with pale background and brown geometric decoration. This favors a synchronism of the two techniques.

SICANI AND SICULI.—After an examination of the texts and other evidence regarding these two related peoples—the Sicani and the Siculi—who succeeded each other on Sicilian soil, Sig. Orsi arrives at the following conclusions. Both are of Italic race and descended from the north: there appears to be no appreciable difference between the monuments which the two peoples have left. Beside the question of race, there is one of archaeology. The pre-Hellenic civilization of Sicily is characterized by rock-cut tombs, no tombs dug in the earth having been found belonging to the Siculan period. Did the Siculi bring with them this type of tomb or did they find it already in use in the island, and adopt it? There are no traces whatever of such a type on the mainland; consequently, its origin should be sought in the relations that existed from the earliest times between Sicily, Greece, and the Orient. Tombs of a similar shape and vaulting are found in Krete, Kypros, and other Greek islands, as well as on the mainland. Such are, in Krete, the grottoes of Anoia and Milatos; in Kypros, a number that are illustrated by CESSOLA and OHNEFALSCH-RIECHTER (*Cypr. Stud.*, 1889, pl. II). Sig. Orsi concludes: "It is nevertheless impossible to admit ethnic relations between Sicily and Cyprus; but the facts I have adduced are certain proofs that Sicily, alone perhaps of all Italic lands, was touched by the reflexes of that still mysterious pre-Dorian civilization which spread not only over the entire Hellenic continent but into the furthest islands, and which we broadly designate by the un-ethnographic term Pelasgian. Now that the origins of this pre-Dorian culture are traced back to Asia Minor and especially Lykia, my hypothesis is confirmed by the existence, in that region, of necropoli identical with those of the Siculi. In the southwest of Asia a great necropolis of this kind was discovered by BENNDORF (*Reisen im Süden Kleinasiens*, I, p. 45), which had several rows of inaccessible cells open in the rock-face of a high mountain, identical with those of Cava d'Ispica, Pantalica, Palazzolo, etc. Analogous ones exist at Sidyma, Kiöbaschi, and other places in Lykia (*ibid.*) and in the valley of the Argeus (HAMILTON, I, p. 225), which, though but little explored, have great structural affinity with those of the southeast of Sicily. It is not therefore too bold to assert that, in the island, this civilization met with the Italic, but both are too little known to allow of any judgment as to their peculiari-

ties, their diffusion and intensity, and as to the ethnic relation between the primitive population of the island and those which in the East had an analogous culture."

AVOLA=ABOLLA.—NUMISMATIC DISCOVERY.—Three miles s. w. of Syracuse is the present city of Avola, where stood the ancient Ἀβόλλα, *Abolla*, mentioned by Stephanos of Byzantion. In its neighborhood there were found, some two years ago, in two small unpainted vases, 33 gold and about 150 silver coins. The gold coins consisted of 4 Darics, a stater of Abydos, 14 staters of Lampsakos, and 14 Syracusan $\frac{1}{2}$ staters or hundred-litre pieces. Of the silver pieces the majority, as is usual in Sicily, consisted of Pegasos staters, and the greater part of the rest were Corinthian drachmas. A large part of this find is described and illustrated by A. LÖBBECKE in the *Zeitschrift für Numismatik*, 1890, No. 2, pp. 167-79. Its special value consists in the beautiful and in part unknown gold coins.

SELINOUS.—DISCOVERY OF AN ARCHAIC METOPE.—We read in the *Notizie degli Scavi* (1890, p. 130): "The new explorations in Selinous began this year with the best auspices. The uncovering of the western fortifications of the acropolis having been undertaken, there was found among material used in these fortifications a beautiful metope, of tufa from the quarries of Memfi, on which are two figures, that of a woman on the left of the spectator and that of a youth on the right. The latter wears on his head an elegant petasos, which leads to his identification as Hermes. The severe archaic style is yet artistically advanced. This precious piece of sculpture will soon be edited in the coming number of the *Monumenti* published by the *Accademia dei Lincei*."

SPAIN.

GRÆCO-PHENICIAN ARCHAIC SCULPTURE IN SPAIN.—M. Heuzey recently read, before the *Acad. des Inscriptions*, a memoir entitled *L'Archaisme græco-phénicien en Espagne*, in which he studies a question of authenticity which interests the general history of ancient art. In about 1869, an important collection of sculptures was said to have been discovered in the mountains s. w. of Murcia at the place called the "Hill of the Saints." Well known in Spain, where they have been described by some of the most noted archæologists, these sculptures gained but little confidence in France. Notwithstanding that several series of casts were sent to the exhibitions of Vienna and Paris in 1874 and 1878, the barbarous extravagance, the disquieting peculiarity of certain types, led the few archæologists who ventured to speak of them in France and Germany to do so briefly and with great caution. The discovery was thus stifled under a ban, and the monuments remained outside the current of science and history.

M. Heuzey, having examined the original sculptures in Spain, has joined the ranks of those who believe the discovery to be perfectly authentic, at least as a whole. By the aid of the directors of the archaeological museum of Madrid, he was able to place before the Academy casts of the pieces which were not exhibited at the Exposition of 1878. These casts represent: (1) a votive statue of a woman wearing a veil that rests on her shoulders—evident traces of Greek archaism are here joined to more recent characteristics; (2) the head of a female statue, crowned with a high tiara—in this fragment the double Oriental and archaic-Greek character is very pronounced; (3) several heads of male statues whose hair, cut in short locks, according to the style of the good Greek period, is rendered, however, by traditional processes that are entirely Asiatic and even Babylonian.

The general style of these sculptures, beyond certain local eccentricities, is Greek and archaic; but the execution indicates a workshop whose products show an Oriental handiwork. M. Heuzey does not believe that the isolated influence of the Greek colonies could account especially for the curious persistence of Oriental technique in this mixed art. According to him, it would be necessary to admit quite an early action of the archaic-Hellenic style upon Phœnician art, which he calls *l'action en retour de l'archaïsme grec*. This Græco-Phœnician archaism, strongly mingled with Asiatic elements, which became, as it were, the last period of Oriental art, must have continued to flourish (in his opinion) especially at Carthage, and still later even in Carthaginian Spain. Hence it spread through the region of Carthage, perhaps even before the late foundation of the important colony of the same name, in 228 B. C.—*Paris Temps*, April 29.

FRANCE.

JEWISH EPIGRAPHY.—It is well known that, outside of tombstones, Hebrew inscriptions in France dating from the Middle Ages, or even the following period, are extremely rare. M. Schwab has communicated to the *Acad. des Inscriptions* two series of Hebrew inscriptions dating from the first half of the XIV century.

He reported that in the **TOUR BLANCHE**, so named from Blanche of Castile, which is the principal monument of *Issoudun* (Indre), a number of Jews who were imprisoned here traced their names on the walls of their prison with formulas of prayer, doubtless for the purpose of being more easily ransomed. One of these inscriptions bears a Jewish date corresponding to the middle of December 1302. One of them has great paleographic interest on account of the peculiar shape of its letters.

At **SENNEVILLE** (near Mantes) M. Reyboubet succeeded in finding and copying with great difficulty, under the wheel of a mill, two inscriptions belonging to Jewish tombstones, the largest of which dates from the begin-

ning of 1339. The letters, which are remarkable for their size (being 12 cent. high) are said to resemble those of the analogous texts recently discovered at Mantes.—*Paris Temps*, April 29.

PROPOSED MUSEUM FUND.—M. Antonin Proust and a large number of his colleagues belonging to the different parties in the Chamber, among whom are MM. Clemenceau, Lockroy, Reinach, Arène, Maret, Millerand, Deschanel, de Cazenove de Pradine, de Breteuil, baron Reille, have deposited in the bureau of the Chamber a project of law for the organization of a *Caisse des Musées* or Museum Fund, for the purpose of facilitating the acquisition of works of art by the museums of Paris and the Departments. It is proposed that this Fund shall consist annually of the sum of 500,000 francs taken from the general funds of the budget, any excess to be carried forward. The Fund would be administered by a consulting council, presided over by the Minister of Fine Arts.—*Chron. des Arts*, 1890, No. 23.

SESSION OF THE CONGRÈS ARCHÉOLOGIQUE.—The Report of Session LV of the *Congrès archéologique* of France, held at Dax and Bayonne in 1888, has only just appeared (Picard, Paris). The volume is useful for its illustrations, chiefly from photographs, of Roman and Gallo-Roman mosaics and monuments, and of the Romanesque architecture of s. w. France, and the Spanish frontier. Basque subjects are conspicuous by their absence.—*Academy*, Aug. 9.

APT (near).—**PHOKAIAN COINS OF MASSILIA.**—In the neighborhood of Apt, by the side of the Domitian road leading from Arles to Milano, has been found an urn containing 102 silver medals of the early Phokaiian period of Massilia=Marseilles. Among them was a conical ivory box containing a bronze ring.—*Ami des Monuments*, 1890, p. 40.

AVIGNON.—**MONUMENT OF CARDINAL LAGRANGE.**—In the Musée Calvet at Avignon is a marble relief representing a dead man with dried and horny skin half-way between a body and a skeleton, a work as admirable as it is horrible. This and a number of statues surrounding it belonged to the mausoleum of Cardinal Jean de Lagrange, Minister of State and Superintendent of Finance of Charles V, who died in 1402. The mausoleum was in course of erection at the time of his death. This most important of all the monuments of Avignon was destroyed in 1751, and its arrangement would not be known were it not for the discovery by M. Eugène Müntz, in the Barberini Library at Rome, among the papers of Suarez, of a drawing of the XVIII century which roughly reproduces the structure of the mausoleum and the principal statues with which it was decorated.—M. EUG. MÜNTZ, in *L'Ami des Monuments*, 1890, pp. 91-5.

BOURGES.—**RESTORATION AND DISCOVERY OF MONUMENTS.**—M. Boeswillwald, the well-known architect, has lately finished several pieces of work undertaken to restore some monuments of Bourges to their original style

and condition. The Hôtel Cujas, which had been badly disfigured, is now reestablished and is to become the civic museum. It is said that there was found here an important stone-relief of the Massacre of the Innocents, which has been purchased by the museum of the Louvre. A second monument is the *grange dixmière* of the chapter of the cathedral, which long served as military stable and storehouse. It is a good example of the civil architecture of the XVII century.—*Ami des Monuments*, 1890, pp. 21-2.

CHENERAILLES.—GOTHIC TOMB.—A charming plate is published in the *Ami des Monuments* (1890, opp. p. 65) of one of the most interesting French Gothic sepulchral monuments that remain. It had never before been carefully reproduced. The tomb is that of the priest Bartholomew, and bears the inscription dated from 1300 which reads: HIC · JACET · DOMINVS · BARTHOLOMEVS · DE · PTALHEA · PRESBITER · QVI · OBIT · DIE · FEST · V · M · (Virginis Mariæ) ANNO · DNI · M° CCC. The tomb has a frame of oblong shape, enclosing a low, slightly-trefoiled, pointed arch, within which are three rows of reliefs. The upper represents the Crucifixion; the middle, the Virgin and Child, with several subordinate scenes, including the presentation of Bartholomew by his patron saint, Aignan; the lower row represents the burial-scene of the deceased, his bier surrounded by mourners.

PARIS=LUTETIA.—A ROMAN RUBBISH-HEAP.—The hillocks formed by the deposit of rubbish outside the city-walls (frequently of great archaeological interest) often became enclosed within the city-limits by the extension of its fortifications. Many such have been long known in Paris; such are the *monceau Saint-Gervais*, the *butte Saint-Roch*, etc. M. Eugène Touluze has discovered one, hitherto unsuspected, at the southern end of the *butte Sainte-Geneviève* at the corner of the *rue Gay-Lussac* and the *rue Royer-Collard*. It rose about eight metres above the level of these streets and descended two metres below the level of the *rue Le Goff*. This hillock is a real archaeological museum and dates back as far as the beginning of the Gallo-Roman period, closing its history in the XVII century. The upper stratum, of about 2.40 met., contained fragments belonging to the XVI and XVII centuries. The XIV, XV, and XVI centuries were represented by a blackish deposit, only 70 cent. thick, containing especially some pharmaceutical pottery. The previous two centuries left a deposit of but 45 cent., containing bones and rude pottery for domestic use. The period from the V to the XII cent. left only a mass of gravel 1.30 met. thick. The Gallo-Roman period is represented by a stratum varying in thickness from 1.70 to 3 met. which contains a mine of information regarding the domestic ceramics of the pagan inhabitants of Lutetia. From certain facts it appears evident that there were houses at this point during the Gallo-Roman period, and that the *débris* was not brought from a distance. The greatest variety of objects were found; a bronze statuette of Mercury, a bronze lion-head,

coins of Augustus, Trajan, Nerva, Tiberius, Claudius, etc., glass vases, *fibulae*, a bronze *statera* or weighing machine. The pottery is of especial interest. On a number of fragments are given varied designs in relief: hunts, single figures, decorative patterns, etc. The plain vases often have an elaborate series of sharply-cut mouldings. The prehistoric period is represented by two fragments of axes of grey silex of the neolithic period, found among fragments of pottery apparently of the bronze age. A potter's establishment, also, was discovered, which evidently existed before the site was turned into a rubbish-heap. Near this point, a grave of the Gallo-Roman period was found.

The most important single piece of pottery is one which the discoverer calls *le vase de Lutèce*, and which he considers the earliest and most precious piece of primitive ceramics that has been found in Paris. It is the only piece yet found which antedates the use of the lathe, and it therefore belongs to the bronze age.—*Revue arch.*, 1890, I, pp. 351-77.

LOUVRE.—Acquisitions.—Egyptian Collection.—The Department of Egyptian Antiquities has made some important purchases at the sale of the Sabatier collection. The following are especially worthy of mention: (1) magnificent Amon of the time of the Ramessidae, corresponding in material and art to the royal colossi of Luxor; (2) crouching statue of Neshutafnut, prophet of Sekhet, dedicated to Tum and Osiris of Thebes; (3) the coffin of the priest Bee-n-Mout, with a magnificent head in black wood; (4) fine bust from a male statue, of the Saitic period; (5) female head in gilt lapis, with white and black incrustations in the eyes; (6) polychromatic terracotta female head, very rare; (7) bronze religious baton or standard to carry in sacred processions, representing a lotus-flower surmounted by a crocodile which bears the divine boat—an extremely rare piece; (8) superb bronze representing the child Horus, surprisingly modelled—one of the most charming specimens of Saitic art, showing, like the famous black statue of Horus already in the Louvre, with what artistic perfection the Egyptian artists of this period could render the most delicate and graceful contours of a youthful body; etc.—*Chron. des Arts*, 1890, No. 23.

XVI-Century Wood-Sculpture.—The Louvre has obtained an important addition in the "Calvary," comprising life-size figures carved in oak, a work of the XVI century, which was formerly in a church at Nivelles. The same museum is shortly to be extended by means of a newly-opened *salle*, containing antiquities from Tunisia and Algeria.—*Athenæum*, June 7.

SALES OF ANTIQUITIES.—The spring season was remarkable for the sale and dispersion of a number of important collections of antiquities and works of art. The most famous of these is that of EUGÈNE PIOT, already mentioned on pp. 244-5. Then comes the collection of ACH. SEILLIÈRE

conspicuous for works of the Middle Ages and the Renaissance. Finally, the SABATIER collection.

NEW WING OF THE TROCADÉRO.—In June, the Minister of Public Instruction, accompanied by M. Larroumet, Director of Fine-Arts, inaugurated, in the west wing of the palace of the Trocadéro, the new gallery of casts, which consists of six halls identical with those in the opposite wing. During the Exhibition of 1889, there were already in these halls a number of large pieces. Such were the portal of the w. facade of Saint-Pierre at Moissac, the corresponding portal of the Abbey of Charlieu, the central doorway of the west front of Saint-Gilles (Gard), the vault of the Great Clock of Rouen, part of the old *Hôtel de Berry* at Toulouse, etc. Numerous pieces have now been added, such as the doorway of the sacristy of the Cathedral of Bourges.—*Chron. des Arts*, 1890, No. 24.

POITOU.—An illustrative work on *Paysages et Monuments du Poitou* is being issued, by subscription, by M. Jules Robuchon, Paris. The illustrations consist of Dujardin heliogravures after photographs taken by the author. The work constitutes a monograph of the monuments of the ancient province of Poitou, composed of the districts of La Vienne, Deux-Sèvres, and La Vendée.—*Builder*, July 12.

RENNES.—The excavations, under the direction of M. Decombe, on the site of the ancient city-walls, rue Rallier, where have been found some inscriptions of which we have already spoken (p. 246), have brought to light seventeen milestones, either entire or in fragments. One of them, in magnificent preservation, is 2.10 m. in height; another (in two fragments), if restored, would be 2.20 m. They may be thus classified: Caracalla and Geta (?), 1; Maximinus, father and son, 2; Posthumus, 2; Victorinus, 4; Tetricus, the father, 3; undetermined fragments, 5.—*Cour. de l'Art*, 1890, No. 27.

RONCESVALLES.—The portrait-statue of Sancho el Fuerte, of Navarre, one of the victors at Las Navas de Tolosa (1212), which had been buried in the church of Roncesvalles since 1622, was disinterred by the prior and canons on June 17. The statue was found, almost perfect, in the spot indicated in the ms. of Huarte (preserved in the convent), an eyewitness of the hiding of the sculpture now brought to light.—*Academy*, July 26.

ROUEN.—**EGYPTIAN ANTIQUITIES.**—M. G. Le Breton, director of the ceramic museum of Rouen, has recently returned from Egypt with a large collection of antiquities. The ceramics and glassware will be placed in the municipal ceramic museum. The other objects—mummies, jewelry, stuffs, lapidary inscriptions, papyri, bronzes, alabaster, sculptures in wood and stone, etc.—will be given to the departmental museum of antiquities.—*Chron. des Arts*, 1890, No. 22.

GERMANY.

AUGSBURG.—**RECOVERY OF PAINTINGS BY ULRICH APT.**—Some months back, Dr. Alfred Schmidt made a discovery of some importance. In the central panel of a well-known altar-piece in the Augsburg Gallery (Nos. 47-51), usually ascribed to Altdorfer, he deciphered the letters APT, introduced on a small heraldic shield. These evidently refer to the painter, as the donor is known to have been of the Rehling family. The name of Apt occurs frequently, in the old registers of the painters' guild at Augsburg, from the second half of the fifteenth century up to the middle of the sixteenth. Manifestly by the same hand as the Augsburg picture are the Transfiguration of the Cassel Gallery, the small Pieta of the Munich Pinacothek, and the large Triptych belonging to the university, but lent for a term of years to the Pinacothek and exhibited there in one of the cabinets. These two latter pictures, formerly ascribed to Altdorfer, are now, on the authority of Dr. Schmidt, attributed to Ulrich Apt, who was born about 1460 and died in 1532.—*Academy*, Aug. 23.

BERLIN.—**ACQUISITIONS BY THE MUSEUM.**—*Statue of the Ancient Empire.*—The Egyptian Department of the museum has recently acquired an important wooden statue of the ancient empire, found to the right of the railway between Medinet-el-Fayûm and Edeva.—*Athenæum*, Aug. 16.

Iliac Vases.—The museum has recently purchased a large number of vases with reliefs representing scenes from the Iliad, the Odyssey, the epic and Theban cycles, with inscriptions relating to the figured episodes. These Iliac vases, of which several examples were already known, will appear in a special publication.—*Revue arch.*, 1890, 1, pp. 302-3.

FRANKENSTEIN.—**DISCOVERY OF MÆDIEVAL COINS.**—Of the coins of the x and xi century found in 1889 at Frankenstein (Silesia), 35 cut denars and 13 fragments are described by Herr F. Friedensburg in the *Zeit. f. Numismatik*, 1890, 2, pp. 210-12. The greater part has been placed in the museum of Silesian antiquities at Breslau. The discovery, consisting largely, as it does, of Bohemian coins, is of especial interest for the history of the province, as a striking numismatic proof of the invasion of Silesia by Bretislav of Bohemia in 1039.

OBERNBURG.—**ROMAN ANTIQUITIES.**—Herr W. Conrady writes for the *Westdeutsche Zeitschrift* (1890, 11, pp. 164-99) a full account of his recent excavations in the town of Obernburg on the Main on the site of a large Roman *castrum*. At the beginning a Roman *ara* in fair preservation was found, and then a series of inscriptions, one of which is dated in the consulate of Aper and Maximus, 207 A. D. There is also a strangely rude sepulchral monument with figures of the deceased and his family, surmounted by a youthful seated allegoric figure, while on each side is another alle-

goric figure holding an inscribed disk. It bears the inscription: DI·M·| GIRISONI USCUBI | FILIO ET BIBULIAE VE|RECUNDI FILIAE CO|NJUGIBUS GIBAIS | OTRI HYADEIA CAEDA | MEM(*ores* or *oriae*) PIETAT(*is*).

OBRIGHEIM.—**FINAL EXCAVATION OF THE CEMETERY.**—Between Feb. 21 and March 25, the last part of this cemetery was excavated—that on the northwest side. Sixteen graves were opened. The contents are described by C. Mehlis in the *Berl. phil. Wochenschrift*, 1890, No. 22. Only one of these graves is remarkable, the last one opened: it is that of a woman, and has very rich contents. On her neck is a necklace of about 140 pearls of all sizes; in her ears, two large silver rings from which hang little baskets of silver filigree with little inlaid white plates. Such earrings are especially common in Hungary and rare on the Rhine. Obrigheim and Erpolzheim are the most western sites where this type, which originated in the East, has been found. There was also a chatelaine composed of a dozen chain links of bronze and iron, to whose supporting leather strap probably belonged six Roman coins—one of Antoninus Pius, another Byzantine. A unique object was a spindle cut out of ivory, a costly piece composed of four parallel rows of rings between which is incised a diamond pattern.

At present, about 300 graves have been opened on the site. The archaeological conclusions can be drawn only after the cleaning of the objects from the last sixteen tombs. The statistic conclusions that can be drawn from the contents, distinguishing nobles, freemen, servants or bondmen, have been given by C. Mehlis, in the *Archiv für Anthropologie* for 1890, under the title *Arm und Reich zur Merovingenzeit*. All the objects are placed in the provincial museum of Speyer, where they are systematically arranged under the heads of arms, ornaments, utensils, vessels, etc.

AUSTRIA-HUNGARY.

OLOBOK (prov. Ostrowo, in Bohemia).—**EARLY MEDIEVAL COINS.**—On the banks of the Prosna, two miles from Olobok, a lot of coins of the tenth century were found. The German cities represented are Metz, Köln, Dortmund, Mainz, Augsburg, Regensburg, Nabburg: the emperors are Henry I, II, and Otho I, II, III. The series of Bohemian coins (74 perfect and 18 imperfect pieces) is, however, the most interesting. Some of these appear to be the earliest Bohemian coins. All the sixty types in the collection are carefully described by F. FRIEDENSBURG, *Zeits. f. Numismatik*, 1890, No. 2, pp. 202-10.

SCANDINAVIA.

We hear from Copenhagen that Professor Söderberg, of Lund, has discovered in a museum at Florence the lost fragments of the Franks Casket, of which the remainder is among the most valued possessions of the

British Museum. The casket is made of the bone of whales, carved with figures, and with Runic inscriptions of the eighth century, which Professor Stephens attributes to the North of England. The newly found portions include a representation of a scene from the Sigurd myth, explained by Runic inscriptions.—*Academy*, Aug. 2.

DENMARK.

COPENHAGEN.—ADDITIONS TO THE MUSEUM.—At the recent sale of the Sabatier collection, the Royal museum of Copenhagen made a number of important purchases: such are: (1) a black basalt statue of Anubis, of the reign of Amenophis III (xviii dyn.), of great beauty; (2) a group in black granite of a man seated by his mother—a beautiful work of the Saitic period, covered with seven inscriptions which show the figures to be that of a queen and her son Ahmes, second prophet of Amon in the great temple; (3) a seated statue of Osiris, remarkable for the inscriptions it bears; (4) a statuette of King Ahmes in calcareous stone—the figure is seated and covered with the *pschent*; (5) crouching statue of a man with both hands on his knees, called Sibu; 90 cent. high.

At the sale of the antiquities of the collection Eugène Piot (May 27), this museum acquired for the price of 13,675 francs, No. 14: head of a youth, under life-size, of the beautiful archaic style of the close of the vi cent. B. C.: smiling face, of a superb oval, the hair built up on the forehead in five rows of ringlets, bound with a *strophion* colored in red, and crowned with a double row of leaves. The execution is of admirable delicacy and precision. It is almost certain that this head represents an Apollon. Beautiful yellow patina; a slight scratch on the nose, which does not alter, in the least, the beauty of the sculpture; pedestal of white marble; height, 154 mil. It formerly belonged to the collection Péretié, at Beirât.—*Cour. de l'Art*, 1890, Nos. 12, 27.

VIGERSTED (Seeland).—ANCIENT FRESCOES.—Professor Kornerup has discovered some interesting old frescoes on the walls and in the dome of the ancient church of Vigersted in Seeland. There are also two paintings by Knud Lavard, said to be of great historic value.—*Builder*, July 12.

RUSSIA.

THE NECROPOLIS OF MOURANKA.—Among the most interesting of the reports made at the recent archæologic Congress at Moscow is that on the excavations made by M. Vladimir Polivanoff and M. de Tolstoï in an ancient cemetery of the village of Mouranka, government of Simbirsk, district of Senguiloi. Among the objects found were a large number of bracelets of women and children, earrings, rings, and household utensils. According to M. Polivanoff, the character of the jewels proves that they

came from Bolgori, the ancient capital of the people of that name, which was, up to the close of the XIV century, the centre of the civilization and commerce of all the peoples dwelling on the banks of the Volga. All along the river has been found the same type of decoration as at Monranka. In October 1889, the tombs were torn up and destroyed along an extent of two hectares, but, thanks to the law of 1888, a large number were preserved intact and the Imperial Archaeological Commission of St. Petersburg is about to undertake methodic excavations.

In this cemetery there are no traces of artificial elevations or *kourgans*. The tombs were never dug to a depth of more than one metre; the bodies were placed in rounded wooden coffins, and were covered with tissues called in Russian *partcha*, resembling somewhat in their material the stuffs used for priests' robes. The date is given by Tartar silver coins placed by the deceased: they bear the names of Khan Oussbeck (1327) and his son Djanibeck (1346), and consequently belong to the XIV century. Local legends and names, and the absence of *kourgans* confirm the idea suggested by the coins, that this is a Tartar cemetery.—*Revue arch.*, 1890, I, pp. 347-50.

ROUMANIA.

M. Henri Revoil, the well-known architect and author of a great work on the mediæval monuments of Southern France, has been charged by the Roumanian Government to inspect the restoration, lately undertaken, of the historic monuments of Roumania. M. Bourgeois, Minister of Public Instruction, has authorized M. Revoil to accept and has also entrusted him with the mission to study the archæologic monuments of the country.—*Chron. des Arts*, 1890, No. 25.

MONTENEGRO.

DIOCLEA.—THE ROMAN CITY.—Reference was made on p. 250 of this volume to the discovery of the ruins of Dioclea or Doclea. Details have since been published in the *Revue archéologique* (1890, I, pp. 434-7) by A. Gérard and R. Cagnat.

Dioclea (in Servian Doukja) is three kilom. north of Podgoritz, at the confluence of two rivers, the Zeta and the Moratcha on an admirable site. The old Roman city must have been on a strategic road leading from Albania to Pannonia and Sirmium. The site and walls are easy to recognize. A few weeks' excavation has enabled a Russian, M. Paul Rowinski, to draw up the plan of the ancient walls with their two gates to the north and south. Within this space, to the west, on the borders of the Zeta, were found the clear and intact foundations of a building which has the aspect of a civil basilica. According to the usual arrangement, it consists of a long pillared gallery with two rows of columns, ending at the north in an

apse. The traces of the piers, the sites of the columns, the apse, the mosaic pavement, all are perfectly recognizable. There are also many fragments of columns, capitals, decorated panels, fragments of a frieze, remnants of painting in the apse, and, finally, some inscriptions which appear to give the list of the statues erected to illustrious persons by the side of the basilica. Outside the northern gate is a street of tombs.

TURKEY.

MOUNT ATHOS.—DESTRUCTION OF MONASTERIES BY FIRE.—Advices from Athens announce a most disastrous fire upon the celebrated Mt. Athos, the holy mountain of the Greek Church. The fire has destroyed the largest part of its wonderful forests. Of the twenty Greek monasteries which have been located upon the mountain for centuries several have been completely destroyed, including four churches. The damage has been estimated at 5,000,000 f. Twenty monks and hermits perished in the flames.—*Boston Herald*, in *Amer. Architect*, Aug. 16; *London Times*, Aug. 22.

CONSTANTINOPLE.—The wing of the new archæological museum which is intended for the housing of the sarcophagi from Sidon and other places is ready, and will be presently opened to the public.—*Athenæum*, June 21.

GREAT BRITAIN.

WALES.—BRITISH INSCRIPTIONS OF THE EMPEROR VICTORINUS.—"Mr. Whitley Stokes, in his *Notes from Rennes*, in the *ACADEMY* of July 26, 1890, mentions a stone inscribed in Roman capital letters of the third century of the Christian era in honor of the Emperor Piauvonius Victorinus, found last April in digging the foundation of the *Bazaar Parisien*. This emperor was one of the thirty tyrants who was supposed to have been slain 268 A. D., who had reigned in Gaul, 'and probably also in Britain,' for somewhat more than a year; and it is added that the emperor's Gentile name is spelt with only one v on a Lincoln milestone (*Eph. Epigr.*, vii, No. 1097). It is worthy of notice that there is also another inscription to the same emperor upon a military stone discovered by the late Mr. Grant Francis in Glamorganshire near Pyle, and deposited by him in the museum at the Royal Institution at Swansea, of which I published a drawing made from the rubbing by the discoverer in my *Lapidarium Wallicæ*, p. 41, pl. 27, f. 1. Here the inscription reads: IMP. | M. C. PIA|VO-
NIO | VICTOR. | ISO. AVG. Another stone, which I found in a ditch at Scethrog, also records the name of Victorinus with another name no longer legible—*Lap. Wall.*, pl. 32, f. 7."—I. O. WESTWOOD, in *Academy*, Aug. 2.

CHESTER.—PROPOSED EXCAVATIONS.—Some repairs executed three years ago in the north wall of Chester resulted in the discovery of Roman inscrip-

tions and sculptures; and a further exploration, started by the Chester Archaeological and Historic Society, produced more inscriptions and sculptures. It is now proposed to set on foot further explorations at the same spot. The former discoveries have excited great interest both in England and on the Continent, and Professor Mommsen, of Berlin, has written to Mr. Haverfield strongly urging further search. Of all the historic sites in England none are so likely to aid our knowledge of Roman history as the Roman military centres, and it is well known that Deva was garrisoned by the Twentieth Legion from the earliest times almost until the end of the Roman occupation of our island. The area of search will be the Dean's Field and the north wall adjoining the portions previously examined.—*Academy*, June 7.

ELY.—THE DIOCESAN RECORDS.—The Bishop of Ely has recently caused all the ancient records of the diocese, hitherto scattered in different places, to be removed to the palace at Ely, where they are now deposited in a spacious muniment room, and made available for historical research. In further pursuance of his design, the Bishop has commissioned Mr. A. Gibbons, author of *Early Lincoln Wills* and other similar works, to prepare a calendar and concise view of these records, which—it need hardly be said—are of more than merely ecclesiastical interest. The episcopal registers proper begin in 1337; and the visitation books and the transcripts of parish registers are in unusually good preservation. It is proposed to print copies of all the wills, and also of the marriage register of the old chapel of Ely House, Holborn. The volume will be issued in a limited edition of fifty copies; and subscribers should address themselves to Mr. A. Gibbon, The College, Ely.—*Academy*, June 7.

KENILWORTH.—EXCAVATION OF THE MONASTERY.—The work of opening up the remains of the Priory Church and the adjoining monastic buildings has begun. The entrance to the monastery was soon found, the gateway being of massive proportions and about 9 ft. wide: they then traced the walls of a spacious room, about 16 ft. wide, which formed the main entrance to the monastery and cloisters [probably the dwelling of the gate-keeper or *portarius*]. The excavation of this room brought to light a quantity of finely-worked stone, the supports of the groined arched roof, and two central keystones with finely-carved bosses, as cleanly cut and as crisp in outline as when first made; also two massive corbels with circular worked caps and fluted brackets. Further on was found a door leading into an outer court, and in close proximity to the western door of the church.—*Builder*, July 5.

LONDON.—The Amorite, Phœnician, and Jewish pottery, casts of sculpture, etc., found by Mr. Flinders Petrie in the course of his recent excavation for the Palestine Exploration Fund on the site of Lachish, will be publicly

exhibited with his Egyptian collections of this year at 6 Oxford Mansions, near Oxford Circus, from Sept. 15 to Oct. 11.—*Academy*, Aug. 2.

BRITISH MUSEUM.—*Presentation of an archaic antefix.*—Lord Savile has presented to the Museum an archaic terracotta antefix, discovered in the excavations he is conducting at Civit  Lavinia, the site of Lanuvium. It is of great beauty and very large, the front portion semicircular in form, measuring 15 ins. high by 16½ ins. wide. The clay is bright-yellow, with details laid in with deep-red and brownish-purple. The hair is arranged low over the forehead, and falls in three locks on either side; it is surmounted by a *stephan * painted with a meander-pattern. From the crown rise two stalks which hang down on either side of the face, terminating on the level of the chin in a palmette. On these palmettes rests an arch of broad *ovolo*, forming a frame for the whole: this *ovolo* is connected with the palmette stalks by a network pierced *  jour*, consisting of three rows of semicircular apertures. The neck is encircled with a necklace.

The mask is strengthened at the back by the addition of a stay which joins the upper part of it to the actual covering-tile, of which it forms the ornament, making as it were a kind of flying buttress. This antefix was recently the subject of a paper read by Lord Savile at a meeting of the Society of Antiquaries.—CECIL SMITH, in *Class. Review*, July, 1890.

R arrangement of Galleries.—Two bays in the gallery of minor Egyptian and Assyrian antiquities in the upper story of the British Museum have been recently re ranged and thrown open to the public. One contains the Babylonian engraved stones, boundary demarcations, title-deeds, grants of land, records of purchases, *etc.*, recently removed from the basement, some as early as 4000 B. C.; on the other side are Assyrian ornaments, *etc.* The other bay contains the Mexican and Peruvian antiquities. The arrangement of the prehistoric gallery at the head of the great staircase is now complete. Among the objects now accessible to the public are the Layton collection of bronze vessels, recently found in the Thames, and the Spanish antiquities collected by MM. Siret, and described in their great work.

New General Handbook.—We understand that the authorities of the British Museum have in preparation a sixpenny handbook or guide to the various collections in the museum, and that it will be ready in about three months. This will, no doubt, be a boon to the general visitor, who will be spared some confusion thereby, but it will not supply the long existing and urgent need of handbooks on each collection, concise, accurate, and judiciously illustrated, without which the Museum is a labyrinth of despair to all but trained students.—*Academy*, Aug. 9.

OXFORD.—The Rev. Greville J. Chester is at present staying at Oxford, where he is engaged in cataloguing the fine collection of Hittite and Phœnician seals in the Ashmolean Museum.—*Academy*, Aug. 2.

PICKERING.—XV-CENTURY WALL-PAINTINGS.—The remarkable series of fifteenth-century wall-paintings lately uncovered and repaired at the church of Pickering is about to be fully described, together with other details of this interesting church, by Rev. Dr. Cox. Mr. Glaisby, of York, is preparing photographic illustrations.—*Athenæum*, Aug. 23.

EAST SHEFFORD.—AN ANGLO-SAXON CEMETERY.—Mr. W. Money communicated to the Society of Antiquaries, on March 20, a note to the following effect, accompanied by some objects. In the course of construction of the Lambourn-Valley Railway, near the Manor Farm, East Shefford (Berkshire), has been discovered what appears to be an extensive Anglo-Saxon burial-place. The situation of the cemetery, like many other Anglo-Saxon cemeteries, appears to have been selected on account of its commanding height, *etc.* Within the excavated space (some 120 yards in length) a large number of skeletons have been met with at a depth of about 2 ft. 9 ins. below the surface. By the side of one of the male bodies was a broad, straight-bladed iron sword of the distinctive Saxon type: it is double-edged, and apparently had been enclosed in a scabbard protected at the top and bottom with an outer casing of bronze, portions of which, with the wood attached, are preserved. Among other objects were an iron spear-head; two knives known as *seaxas*; a cruciform *fibula* of copper-gilt, on a woman's shoulder, and, on another, two circular bronze *fibulae* of the type usually found with Saxon interments in Berkshire, Oxfordshire, and Gloucestershire. The date must be the sixth or seventh century.—*Proceed. Soc. Antiq.*, vol. XIII, No. 1, pp. 107-8.

SILCHESTER.—The project, started by the Society of Antiquaries, for the systematic excavation of the entire site of Silchester has been cordially taken up. Subscriptions to the amount of £200 have already been received, in addition to Dr. Freshfield's offer to provide the cost of laying bare one *insula* or square.

AMERICA.

UNITED STATES.

NEW YORK.—METROPOLITAN MUSEUM.—GEORGE F. BAKER, Esq. of New York City has purchased, and presented to the Metropolitan Museum of Art, Brugsch Bey's entire collection of Egyptian textile fabrics, covering a period from the earliest times from which mummy-cloth is obtainable down to the seventh or eighth century after Christ. The collection contains about 860 pieces. The Museum already owned a collection of 369 pieces purchased from Theodor Graf, of Vienna. Probably the Museum now has as fine a collection of these objects as exists anywhere. The bulk of Theodor Graf's collection went to the Imperial Museum of Industrial

Arts at Vienna, one set of duplicates going to the South Kensington Museum in London, the other to the Metropolitan Museum. We wish some generous and public-spirited man would buy the Graf collection of colored Egyptian portraits, of the time of the first Christian centuries, the best in the world.—*N. Y. Independent*, Aug. 28.

Models for the Museum.—*La Champagne*, from Havre, brought two large models (one-twentieth full size) of the Parthenon and the main façade of Notre Dame, of Paris, to be followed later by its other façades, as well as by models of the Temple of Karnak, the Pantheon, the Arch of Constantine, St. Trophime, etc. The Parthenon and Notre Dame will be set up in the Great Hall of the Museum, with the practical assistance of M. Joly, who accompanied them to this country. The restorations shown in the model of the Parthenon embrace the latest results of M. Chippiez's profound study of the subject.—*N. Y. Tribune*, Sept. 12.

COLUMBIA COLLEGE.—*Avery Architectural Library.*—The Avery Architectural Library in memory of Henry Ogden Avery (architect, who died April 30), founded by his parents, Mr. and Mrs. Samuel P. Avery, provides: (1) The giving of the private library formed by the late Henry O. Avery, consisting of about two hundred volumes relating to the history and practice of architecture and the connecting arts, volumes of photographs, and his professional books. (2) To pay for the purchase of books most useful to the student and profession for reference, which may be collected by the first of January next, not exceeding the sum of fifteen thousand dollars. (3) On the first of July was paid the treasurer of Columbia College fifteen thousand dollars to serve as an endowment fund, the income of which is to provide for the binding and repairing of the books, and for the purchase of new publications and other works in the same line as provided for.

The purchases are to be made by a commission of three persons, viz.: the librarian of the college (now Mr. George H. Baker), the professor or acting professor of the architectural department of the School of Mines (now Mr. William R. Ware and Mr. A. D. F. Hamlin), and Professor Russell Sturgis, whose successor in case of his death or declination at any time is to be selected by the other two members of the commission, and who is to be always an architect not immediately connected with the college. The books are to be always kept together in a separate room or alcove, and are to be known as the "Avery Architectural Library," and to be used as a library of reference only.—*Home Journal*, July 16.

A. L. FROTHINGHAM, JR.

SUMMARIES OF PERIODICALS.

ARCHIVIO STORICO DELL'ARTE. 1890. Jan.-Feb.—A. VENTURI, *Emilian Sculpture during the Renaissance. I. Modena* (pp. 1-23). Modena was very backward in taking any share in the Renaissance, being at a very low ebb during a great part of the xv century. Agostino di Duccio of Florence first came, in 1442, to show its inhabitants the new style. A part of the marble altar of the cathedral by him is encased in the wall of the church with the inscription: AVGVSTINVS DE FLORENTIA F 1442. To the same artist belongs another group now placed in a similar position. Native art, however, began only with *Guido Mazzoni dei Paganini*, who embodied all its peculiarities. He began by executing realistic masks, superintending public festivals and religious dramatic performances. He then tried his hand at modelling terracotta figures, in which art he showed great originality of a realistic sort, his work beginning in about 1470. He executed large compositions of terracotta figures, coloring them also with delicate tints. He died in 1518 after having spent many years away from his native city especially in Venice (1489) and Naples (1489-95). In 1495, he followed Charles VIII to France; and, in 1498, he became a member of the school formed at Tours. He had the honor of then-executing the famous monument of Charles VIII in Saint-Denis, said to be the finest monument in France at that time, signed OPVS PAGANINI MYTINIENSIS: it was destroyed by the French revolutionists. Subsequent to 1507, he executed two statues of Louis XII, after whose death in 1515 the artist returned to his native city.—U. Rossi, *The Carrand collection in the Museo Nazionale at Firenze* (pp. 24-34). This is the last of a series of papers in which a cursory survey is given of the best pieces in this famous collection generously given to the Museum in Florence and especially noted for its ivories. The present paper describes the bronzes, plaquettes, medals, seals, cameos and intaglios, leathers, wood-sculptures, stuffs, arms, iron-work, marble sculptures, and paintings. The bronzes are of great importance, and are especially strong in pieces of industrial art such as vases, candelabra, inkstands, bells, statuettes: the earliest pieces date from the xii century, but the greater number from the Renaissance: Andrea Riccio is well represented, and so are the schools of Venezia and Padova, while the Tuscan group, though small, is very choice. A number of pieces belong to France and the Orient. The collection contains 171 plaquettes. One of the most important series is that of the stuffs.—NATALE BALDORIA,

The artistic monuments of San Gimignano (pp. 35-68). This long paper is a summary of what is known of the monuments of San Gimignano, whose paintings have been so carefully described by Crowe and Cavalcaselle, and are known also from photographs. The paintings and sculptures are treated here in detail. The documents are mainly obtained from PECORI, *Storia della terra di S. Gimignano*.—NEW DOCUMENTS. U. Rossi, *Zaccaria and Giovanni Zacchi da Volterra*. For a summary of these documents see p. 240 of the JOURNAL.—REVIEWS and BIBLIOGRAPHY.—MISCELLANIES.

A. L. F., JR.

ARCHIVIO STORICO LOMBARDO. 1890. March.—A. GAROVAGLIO, *The Worship of Mithras in Lombardy and especially in Milano*. This short paper describes a number of monuments relating to the worship of Mithras found in or near Milan and now in the archaeological museum of that city. These are: (1) a votive altar dedicated to Cautopates, a well-known appellative of Mithras, was one of many (that were lost) which decorated a Mithraic cave at the foot of Rocca d'Angera, on which stood the mediæval fortress of the Visconti: from it came, also, the four beautiful capitals which have in relief the principal Mithraic symbols (griffins and lions). (2) The so-called *urna di Valperio*, elsewhere illustrated. (3) A monument found in rebuilding a house at the juncture of Via Oriani with Via S. Giuseppe: the sculpture shows a continuation of Greek influence, while the architecture is already corrupt. A fine youthful figure occupies a central niche and is surrounded by the usual naked genii; there are fragments of two bulls, part of a frieze with four symbolic griffins. There are, also, a badly-mutilated figure of Mithras, and a lotus-flower. The beauty of the sculpture leads the writer to assign this newly-discovered monument to the period between Hadrian and the Antonines.

A. L. F., JR.

BULLETTINO DI ARCHEOLOGIA CRISTIANA. 1888-89. Nos. 1-2.—G. B. DE ROSSI, *Discoveries in the cemetery of Priscilla during 1888-89*. Gallery α of the primitive nucleus of the cemetery of Priscilla was originally intended to receive a series of sarcophagi in arched niches. From it, passing into an unexplored portion of the catacomb, a similar grandiose *ambulacrum* was reached, filled with fragments of paintings and sarcophagi. There were several separate *hypogæa*, the plan of the main one being published in pl. 1-11. They were originally isolated, though closely connected with the galleries that surround them on all sides. 1. *An anonymous hypogæum with sarcophagi*. This gallery had seven niches for sarcophagi, of which only small fragments remain, showing them to be of a very early date, as they bear no distinctively Christian subjects or decoration. There were found early inscriptions of *Parhesiastes* and

Petronius Secundus. In one of the niches are remnants of frescoes: the subjects are (a) the curing of the man born blind (?); (b) Adam and Eve tempted, and Jonah swallowed by the whale. The juxtaposition of these two scenes is symbolic and quite new. The art is far earlier than that of the similar frescoes of the late-third and the fourth century. II. *The hypogeum of the Acilii Glabrones.* A short notice of this important discovery was given in the JOURNAL, vol. IV, pp. 214-15. The hypogeum in question was in the shape of a gamma. The inscriptions of the *Acilii Glabrones*, fragments of which were found, furnish occasion to the writer to give a complete monograph of this family, proclaimed, by the Emperor Pertinax, to be "the most noble of the patricians," whose history is continued by consular lists and epigraphic monuments down to the fall of the Empire. An epitaph is explained as that of *Acilii Verus* and *Priscilla* his sister, children of *Vera Priscilla* wife of *Manius Acilius Glabrio*, consul in 152 A. D. The writer seeks to prove that *Manius Acilius Glabrio*, consul in 91 A. D., was condemned at the same time and for the same reason as *Flavius Clemens* and *Flavia Domitilla*, i. e., for being a Christian. It is evident, from the inscriptions, that this hypogeum served for the burial of several successive generations of the family and dependents of the *Acilii Glabrones*; also that this was one of the earliest nuclei of the catacomb of *Priscilla*.—A short treatise follows on *The monogram X̄ and the sigla IH̄X̄ in the hypogeum of the Acilii and surrounding galleries.* Attention is called to the importance of the X̄ used as a part of the text as a *compendium scripturae*; and to the rarity of the early sigla IH̄ (IH̄) instead of IHC in the group IH̄X̄ (Ιησοῦ Χριστοῦ).—In a chapter on *The Acilii Glabrones buried in the cemetery of Priscilla*, is given a list of the members of the family that attained to the consulate from A. D. 91 to the beginning of the fourth century. With these it is attempted to connect the *Acilii* mentioned in the catacomb inscriptions.—A special chapter is given to the *Manius Acilius Glabrio, consul in 91 A. D., condemned to death by Domitian*, containing also a plea for the recognition of a noble element among early Christian society in Rome, and an attempt to reconcile the supposed Christianity of the *Acilii* with the religious and political honors showered upon them.—*Note on Acilia Vera buried in the crypts of Lucina.*—*Meetings of the Society of Christian Archaeology.* This is a summary of the addresses made at the meetings of the society held during its thirteenth year, 1887-88.—*Note on T. Petronius Secundus, prefect of the praetorium under Domitian.*

A. L. F., JR.

BULLETTINO DI PALETOLOGIA ITALIANA. 1890. Nos. 1-2.—N. MORELLI, *Two caverns recently explored in the territory of Toirano* (province

of Genova) (pp. 1-19; pl. 1). A notice of this paper will be found on p. 235 of this volume.

Nos. 3-4.—PIGORINI, *A Necropolis of the bronze age at Copezzato in the commune of San Secondo Parmense* (pp. 21-38). A shorter report by the same writer on this discovery, published in the *Notizie degli Scavi*, was summarized on p. 221 of this volume. Further peculiarities should be added. Not only are the cinerary vases placed so close together as often to touch, but often one is found within another, both of them full of human bones. This economy of space is also found in most of the necropoli mentioned above. This arrangement was made possible only by not burying the vases at all, or, more probably, by covering them only so far as the neck. There seems, therefore, to have been no distinguishing sepulchral mark by which to identify them. The examination of this necropolis is accompanied by a running commentary on the others of the same class already enumerated. Some *barbaric* (before 773 A. D.) remains were found in the neighborhood, at a depth of 1.50 met.; some *Roman* antiquities at a depth of 2.50 met.; while the tombs of the *terramaricoli* of the bronze age were at a depth of seven metres. A calculation based on the position of these various strata would lead to the thirty-third century B. C. for the date of this early necropolis.—PIGORINI, *The bronze fibula in the terrenare* (pp. 38-40). Professor Orsi recently expressed the opinion that the *terrenare* could not be as early as suggested in the preceding article, because in them as well as in the contemporary *palafitte* of Lake Garda have been at times found bronze fibulæ identical with two from tombs in Mykenai supposed to date from the XII century B. C. But, as Undset remarks, no such fibulæ have been found with certainty in the real stratum of the *terrenare*. They appear to have been imported at the close of the period of the *terrenare*. This fact and that of the discovery of terracotta figurines at Hisarlik, Mykenai, Tiryns, etc., seem to demonstrate that the *terrenare* period, beginning we know not when, came to a close at the time when there began to arrive in Italy from Greece and Asia Minor the elements which created, in the valley of the Po, the civilization of the first bronze age.—STROBEL, *The dog in the terrenare* (pp. 40-44). This is a defense of the writer's assertion of the existence in the *terrenare* of a third species of dog which he terms *canis spalletti* Strob, and which he adds to the other two previously-known species, *canis palustris* Rütt. (Jeitt.), and *canis matris optimæ* Jeitteles. His classification was published in his article, *Le razze del cane nelle terrenare dell' Emilia*, in the *Bull. di Paleol.*, 1880. His opponent is T. Studer in *Der Hund der Battaks auf Sumatra*, who ignores the *canis spalletti*, substituting apparently the *canis f. decemmanus*. The special and radical characteristics of the *canis spalletti* are pointed out.—BOOK REVIEWS.—NEWS.

A. L. F., JR.

BULLETIN DE CORRESPONDANCE HELLÉNIQUE. 1889. May.—

S. REINACH, *Antiquities discovered at the theatre of Delos* (pls. XII, XIII). During the year 1882, excavations were made at the theatre of Delos under S. Reinach, bringing to light the three front rows of seats and a portion of the orchestra with the foundations of the stage. As instruments of precision were lacking, a plan of the theatre was not made. The few figured monuments and inscriptions discovered are here published. Three of the four inscriptions were found upon bases for statues: one acquaints us with the name of a hitherto unknown Athenian dramatic author, *Dionysios son of Demetrios*, who was victorious in the contests for tragic and satiric poetry. The most interesting monument is the pier of a terminal herma, covered with *graffiti* of the first century B. C., amongst which are figured animals of various kinds.—FOUGÈRES, *Inscriptions from Thessaly*. The twenty-five inscriptions here published were copied in Thessaly during the month of May, 1887. They were found at Larissa, Palaia-Larissa, Phalanna, Kiërian, Pharsala, Pheres and Halos.—P. JAMOT, *Boundary-stone between the territories of Kopai and Akraiphiai*. At the extremity of Cape Phthelio is found a huge cubical rock inscribed: Ὅρια Κ[ω]π[α]ίων | ποτὶ Ἀκρηφιαίων | ὁρίων Βοιωτῶν. The forms of the letters point to the first years of the restoration of the Boiotian League under Kassandros. The stone marks the boundary of the towns Kopai and Akraiphiai, and seems to prove that the lake, or at least the western part of the lake, belonged to Kopai. Whether the intervention of the League was *de jure* or casual is undetermined.—TH. HOMOLLE, *Decrees of the Athenian people in Delos*. Several long decrees are here published. From one of these it appears that the *agoranomoi* existed at Delos after they had ceased to exist at Athens. From another it appears that the same ephebic institutions existed at Delos as at Athens.—F. DURRBACH, *Inscriptions from Imbros*. Five inscriptions are here published, one of which seems to date from the v century. The rest are later.—P. FOUCART, *Athenian Decree of the year 352, found at Eleusis*. This is a long inscription, found at Eleusis in the excavations under the direction of M. Phillos and published in the *Ephemeris* in 1888. It has now been very thoroughly studied and reconstructed by M. Foucart. The subject of the inscription relates to the *ἱερὰ ὁρμήα* or sacred territory between Attika and Megara dedicated to Demeter and Kora. The inscription furnishes new illustrations of the mode of administration under the democratic government, and a new mode of consulting the oracle. The latter is especially interesting. The question to be decided was whether this sacred territory should be rented or left uncultivated. The two answers were engraved separately on two metal tablets, which were then rolled up and placed in similar packages. These packages were then drawn and deposited, one

in a silver and one in a golden urn. These were sealed and counter-sealed and guarded in the akropolis until the deputies returned from the oracle, which was asked to decide which urn contained the proper answer. The urn indicated by the oracle was then opened in the popular assembly and the answer revealed. The reply of the oracle in this case is unknown, though it probably indicated that the sacred territory should remain uncultivated.—H. LECHAT, *Hermes and the Graces* (pl. xiv). The bas-relief here published was discovered by M. Kabbadias, in Jan., 1889, on the Akropolis at Athens. It is an archaic Pentelic marble relief of little artistic merit, but interesting for the subject, which represents Hermes and the Graces with a fifth personage who seems to be an initiated hero. The interpretation of the female figures as Graces, instead of Nymphs, Seasons, or Daughters of Kekrops, seems to be justified by the important position held by the Graces in the ancient Athenian cult. The hero would be related to the Graces as Triptolemos to the divinities of Eleusis or Erichthonios to the Daughters of Kekrops.

December.—G. FOUGERES, *The Lion of Tegea* (pl. vi). This relief has long been known. It was mentioned by Ross in 1834, better appreciated by Conze and Michaelis in 1860, and by Milchhöfer in 1879, but is now reproduced for the first time. It appears to be a slab of a frieze of a date not later than the iv century, in style reflecting the art of Skopas, and probably once decorated the temple of Athena Alen.—G. RADET and P. PARIS, *Inscriptions from Syllion in Pamphylia*. Three decrees are here published which were made in honor of the family of the Megakles, one of the most powerful in Syllion, of which various members were public benefactors. The public assemblies of Syllion seem to have been three in number, a *boule*, a *gerousia* and an *ekklesia*, while the municipal functions were discharged by the *dekaprotia*, the *demiourgia* and the *gymnasiarchia*. The classes of the population ranking lower than citizens were also three in number, the *ouindiktarioi*, the *apeleutheroi* and the *paroikoi*.—M. COLLIGNON, *Statue of Poseidon found at Melos*. This statue was discovered at Melos in 1877 at a locality called Klima, below the amphitheatre. It is now in the Central Museum at Athens. It is a colossal statue, furnishing no new detail in the figured representations of Poseidon, showing to a certain extent the influence of the Pergamene school and dating probably from the second century B. C.—G. DOUBLET, *Decree of the Senate, from Tabai in Karia*. This inscription was copied in 1887 from a marble in the wall of a house at Davas, the ancient Tabai. It has a striking resemblance to the senatorial decree of Lagina (*Bull. de corr. hellén.*, ix. p. 437). After referring to the conduct of the inhabitants of Tabai during the war with Mithridates, demands are made (1) for the confirmation of the attribution of certain lands granted them by Sulla; (2) that they be permitted to fortify Thy-

esses, and (3) that the Romans take into consideration their kindly disposed character.—H. LECHAT, *Bas-reliefs in the Museum at Constantinople* (pl. ix). Two reliefs are here described. One, which hails from near Pergamon, is a votive offering representing a horseman before an altar, where also stands a heavily-draped female figure. The horse and attendant of the hero stand at one side. The relief bears no inscription, but its style indicates that it belongs to the end of the fourth century or the beginning of the third. The second relief was brought from Kyzikos in 1869. It is inscribed with a fragmentary honorary decree and a head in profile. This may be a portrait, but it resembles so strongly the head of Pan on coins from Pantikapaion as to suggest that the person honored was a resident of that town. Possibly it was Leukon I, who was similarly honored by the Arkadians of Kreta and whose date corresponds with the age of this relief.—E. LEGRAND, *Two Latin Inscriptions from Karystos*. These inscriptions were found in June 1889, and relate to the history of the quarries of Karystos.—M. HOLLEAUX, *Edict of King Antiochos II*. This is an improved edition of the important inscription discovered at Durdurkar in Phrygia in 1884, and published in the *Bull. de corr. hellén.*, in 1885.—G. COUSIN and G. DESCHAMPS, *Letter of Dareios, son of Hystaspes*. This inscription was discovered in April, 1886, at Deïrmendjik, near the road from Tralleis to Magnesia, and is now in the Louvre. It is in characters belonging to early imperial times, but would appear to be an authentic copy of a letter written by Dareios to Gadates. In this letter Dareios praises his servant for having planted in Asia Minor trees from beyond the Euphrates, but blames him for not having sufficiently respected the sacred gardeners of Apollon.—S. REINACH, *Archaic statues of Kybele discovered at Kyme* (pl. viii). Amongst the objects discovered by M. Reinach at Kyme in 1881, were two figures of Kybele reproduced on pl. viii. These figures are closely related in type to the seated figures which lined the sacred avenue at Branchidai, though one is here in basrelief. Terracotta figurines of this class are numerous, but the most interesting of such monuments are the 47 small calcareous figures in the museum of archaeology at Marseilles. These would appear to have been brought from Phokaia or some other city of Asia Minor. The Kybele type was used frequently for sepulchral monuments, and is ultimately of Babylonian origin.—S. REINACH, *Sepulchral Inscriptions discovered at Kyme*. Six brief inscriptions from sepulchral stelai are here published.

ALLAN MARQUAND.

ΕΦΗΜΕΡΙΣ ΑΡΧΑΙΟΛΟΓΙΚΗ. JOURNAL OF THE ARCHÆOLOGICAL SOCIETY IN ATHENS. 1889. Nos. 1-4.—B. L. LEONARDOS, *Inscriptions of the Amphiarëion* (contin.). No. 24, the earliest inscription

found in the Amphiareion; is cut upon a Hermes, the head of which is wanting: The hair fell over the breast in three curls on each side, and down the back in a broad band of wavy locks. The inscription, Στρόμβχος ἐποίησεν Ἀθηνάιος, gives the name of a new artist. No. 25, Diogenes, son of Asklepiades a Halicarnassian, dedicated his brother Herakleitos to Amphiarnos. Thoinias, son of Teisikrates, the Sikyonian, made (the statue). Thoinias is mentioned on the monument of Brutus, and Teisikrates, son of Thoinias, on the monument of Sulla (Ἐφῆμ. Ἀρχ., 1885, pp. 103, 105; 1886, p. 55). No. 26 is a list of the silverware of the god Amphiarnos with the names of the donors. The list was made when Lysandros was archon, Saon was priest of Amphiarnos, Hierokles son of Damarchos, Hieron son of Nikobios, and Philletides son of Thrason were hierarchs. The date is about the same as that of several other inscriptions of the Amphiareion. This inscription is compared with several others, especially with *CIG*, 1570. No. 27 is a metope with the inscription Ν: a similar metope with inscription ΓΟ is described in Ἐφῆμ. Ἀρχ., 1885, p. 154. If the two belong to the same word, it might be ἐ[πο]ι[ήσε]ν, or, if not, ἀνέθηκεν. No. 28 is a decree in honor of Pytheas, son of Sosidemos, from Alopeke, who had, as overseer of springs, rebuilt the springs of Ammon and Amphiarnos. The date is the archonship of Nikokrates, 333 B. C. Nos. 29-33 are cut upon broad pedestals (πλατεῖα βάθρα) composed of several blocks or alabs: No. 29 contains eight honorary decrees of the city of Oropos, the second of which is very fragmentary and is in Boiotian dialect; No. 30 contains eight similar decrees besides dedicatory inscriptions of statues of Ptoion and his wife Aristonike dedicated respectively by Aristonike and her daughter Timagora; No. 31 contains the inscriptions (Ἐφῆμ. Ἀρχ., 1885, p. 107) recording the dedication by Demokrite of statues of her father and son, besides two honorary decrees of the Oropians; No. 32 contains two honorary decrees of Oropos; No. 33 records the dedication, by Mnaseas, of statues of his father Diodoros and his mother Phanostrate, and contains six honorary decrees of Oropos. Two other pedestals are described.—ST. A. KOUMANOUDIS, *Inscriptions of Athens, Amorgos, and Gytheion*. No. 1, a boundary-stone found at Ampelokepoi northeast of Athens, bears the inscription *Ἡερὸν : Διὸς : μιλίχιο : ἀγρ :* Ἀθηναίως. The characters are in part those in use before Eukleides. The meaning of ἀγρ is unexplained. Zeus Mellichios appears to have been a god publicly accepted in Athens, not merely worshipped by private persons, as Foucart (*Bull. de corr. hellén.*, 1883, p. 506 ff.) has supposed. No. 2, *Ἡερο . . . Ἀλαρ . . .* in two lines on a fragmentary stèle was found near the Akropolis. No. 3 is a fragmentary account of some building: the broken slab containing the inscription was found in Athens. No. 4, an Attic inscription of the fourth century B. C. (the place of its

discovery is unknown) records a decree in honor of some men who had shown courage against the enemy: about half of the inscription is wanting. For similar records, see *Bull. de corr. hellén.*, vol. XIII, p. 257 ff.; *Ἐφημ. Ἀρχ.*, 1883, p. 134; 1884, p. 135; 1887, p. 187. No. 5, a fragmentary Attic decree in honor of an Epidamnian and an Apolloniate: it was found in excavations near the Λεωφόρος Ὀλγας. No. 6, a fragmentary inscription of the third century B. C., records the dedication of *phylai* to Athena by slaves or metics who have escaped prosecution. Similar inscriptions are *GLA*, II, 2, No. 776, 768, *Addenda*, 776^b. No. 7, Δ]ὺς [α]ταυβύρον, is inscribed on a base or altar, in two lines, in characters of the pre-Christian Roman times. No. 8, Ἰταλικὸς ξενίῳ Ἀσκληπιῶ, on a base of Pentelic marble, was found near the Olympieion, as were also Nos. 7 and 9. No. 9, inscribed on a cubic block, shows that a statue of Hadrian was set up by the senate and people of the Koropisseans, the metropolis of the Kistai: a note concerning coins of Koropissos is added by I. N. Sboronos. No. 10, an inscription from Amorgos, contains provisions regarding a loan made, apparently by the city, to individuals: the inscription is very fragmentary. No. 11, . . . λιος Λαμπῶς Ἡλείου Ἀσκληπιῶ ἐπηκόῳ εὐχῆν, is inscribed upon a small altar found at Gyttheion.—I. N. SBORONOS, *Analecta Numismatica* (pls. 1, 2; five cuts). Pl. 1 gives 25 coins of Byzantion; pl. 2 gives 27 coins of various places and two engraved gems. The headings of the article are as follows: "The care (*θεμελίαι*) of Eurypylos." "Keroessa the mother of Byzas." "Io." "Poseidon." "Byzas." "Monument of Boidion the betaira." "The trophies in the Melion of Byzantion: Altar of Athena Skedasios or Ekbasios." "The so-called *Kyproi* of Byzantion: Statue of Artemis Lampadephoros." "Coins of the Byzantians and of Rhoimetalkos." "The raving Daphne (*Δάφνη μαινομένη*) of the Kalchedonians." "Some other coins of the Byzantians (golden horn, obelisk, Strategos Leon, etc.)." "Coins of the Paionian Lainians." "The Euxine Sea." "Perseus and Andromeda (copy of a wall-painting)." "The Homeric poems in relation to the types of coins." "Numismatic types as pendants (dancing nymphs, Apollon and Artemis, Kapaneus and Pyle)." "River and Sea." "Philippoupolis Trimontium." "Herakles and Echidna or Hydra." "Herakles and a sea-deity (*θάλασος δαίμων*)." "Epigraphy of the coins of the Byzantians." "The word *βασιλεύονσα* as epithet of cities." The published coins are described and discussed in detail in connection with other monuments and ancient writers.—D. PHILIOS, *Archaic Heads from Eleusis* (pls. 3, 4, 5, 6). Three heads are published. The first has been placed upon a torso in the Central Museum in Athens. The statue represents a female. The thick hair, which shows remains of red color, is arranged in close curls about the forehead, and, with the exception of two locks behind

each ear, falls in one broad mass behind; a stephane confines the hair, passing over the top of the head from ear to ear; behind each ear is a hole for attaching something. The work is ascribed to the end of the sixth or the beginning of the fifth century B. C. The second head resembles that from the Akropolis published in *Εφημ. Ἀρχ.*, 1883, pl. 6; *Jahrbuch*, 1887, pl. 13. The hair is so arranged that no locks fall over the breast. This head belongs to the same period as the first. It has been injured by fire. The third head is assigned to the middle of the sixth century B. C. It is compared with that in the Rampin collection (Rayet, *Monuments de l'art antique*, pl. 18). The person represented is a boy or youth. The hair is arranged in cork-screw curls all about the head, and is confined by a band about the crown. This head has been somewhat injured and defaced. A fourth head is described, much smaller than the others ($\frac{1}{4}$ life size), and like them belonging to the period of ripe archaism. This head also has suffered from fire.—CHR. TSOUNTAS, *Investigations in Lakoniké and the Tomb of Bapheion* (pls. 7, 8, 9, 10; cut). In March, 1889, the writer was sent by the archaeological society to excavate the tomb at Bapheion (Vaphio) and at the same time to make investigations in the neighborhood in search of other remains of the same early period. On the site of Therapnai, near the temple of Menelaos, fragments of Mykenian vases were found, but excavations led to no results. Near Amyklai were discovered two tombs dug in the earth, like those of Spata and Nauplia. On the hill called Paleopyrgos, a little south of the tomb of Bapheion, fragments of Mykenian pottery and a few stone utensils were found. A bee-hive tomb (*ταφὸς θοῦρός*), like that of Menidi was opened at Arkina (or Arkinni) in the Taygetos Mts., near Arna, about six hours southwest of Sparta. The length of the *dromos* is 2.65 m., the depth of the *stomion* 2.80 m., its width about 0.78 m., its height 1.16 to 1.30 m.; the *tholos* is 4.70 m. in diameter, and the walls are preserved to a height of about 3.75 m. For about 0.55 or 0.60 m., the building is cylindrical, and above this the walls converge in the usual way. The stones are small and unhewn. Ashes were not found in the tomb; bones and teeth were found. Besides these, the tomb contained five white stone heads, a polished elliptical stone without carving, a gold ornament similar to that in Menidi (*Kupfelgr. v. Men.*, pl. 5: 10), a copper nail, and fragments of pottery without ornament. The opinion is expressed that the names Arkina and Arna are ancient. Arna occurs also in Boiotia and Thessaly. The ancient inhabitants of Arkina and the neighborhood were probably Minyans. The tomb at Bapheion has attracted the attention of many travellers. The *dromos* looks toward the east, and is 29.80 m. in length. Its width is 3.45 m. before the *stomion*, 3.18 m. at a distance of 23.10 m. from the *stomion*, the point where the right wall ceases. In the *dromos* were found traces of

coals, two leaves of gold, a fragment of electrum, and many fragments of pottery, partly unadorned, partly adorned with figures of the Mykenian epoch. The *stomion* is ill preserved; the lintel has fallen, and the stones which formed it have been broken up and removed. The lower width of the *stomion* is 1.93 m.; its depth at the bottom, 4.56 m.; its sides are of large hewn stones. Extending across the *stomion* is a pit 1.60 to 1.80 m. wide and 1.90 m. deep. At the bottom of this pit was a layer of ashes, but nothing further was found in it except earth and rubbish. The *tholos* is 10.15 to 10.35 m. in diameter; its floor is uneven, covered with earth mixed with ashes, and charred bones were found scattered about, as were also various objects of gold, silver, copper, and stone. To the right of the centre is a pit or grave 2.25 m. long, 1.10 m. wide, and 1 m. deep: the sides are formed by small slabs placed horizontally upon each other, the top and bottom by larger slabs. Bones were not found in the grave, nor were ashes or charcoal. Various objects were found here. Plates 7 and 8 represent numerous ornaments and utensils of various metals; plate 10 represents forty engraved stones (*Inselsteine*), most of which were found in the grave, though many objects of various kinds, including Mykenian pottery, were found on the floor of the *tholos*. Plate 9 represents, in gilt, the most striking objects found in the grave. These are two golden cups with figures in *repoussé*. [For a description of these cups, see *News*, pp. 371-2]. Besides the cups, other objects represented on the plates are described in detail.—D. PHILLOS, *Excavation of Ancient Tombs at Eleusis* (6 cuts). In the *Πρακτικά τῆς Ἀρχ. Ἐταιρ.*, 1884, pp. 83-7, the writer reported the discovery of very ancient tombs in a field on the southern slope of the hill of the akropolis at Eleusis (report here copied). Several of these tombs have been excavated and are here described. They are rectangular and of proper size for the reception of human bodies. In these graves were found human remains with charred wood. In some, the bodies appear to have been burned, in others not. In one grave the corpse seems to have been laid not straight nor upon its back, but upon its side with bent legs. Remains, mainly skulls, of children were found in jars of Mykenian style. Some other archaic vases were found, and also some objects of metal. Another tomb was excavated underneath an ancient wall. In this were unburnt bones and pottery almost all of Mykenian style, though some pieces approach the "geometric" style. Bee-hive tombs have not been found at Eleusis.—I. N. SBORONOS, *Supplements to the Book "Nomismatique de la Crète Ancienne"* (pls. 11, 12, 13). Sixty-nine Cretan coins are published and described. These the writer had been unable to incorporate into the first part of his book. They represent the coinage of Anopolis, Apollonia, Apterna, Arkadia, Arsinoë, Achaia, Chersonesos, Knosos, Kydonia, Eleuthernaï, Eranos (or Ertaiia or Erythraia),

Eltyna, Gortyna, Hierapytna, Hyrtakina, Itanos, Lappa, Lisos and Hyrtakina, Lyttos, Olous, Orion, Phaistos, Phalasarna, Polichna, Polyrenion, Praesos, Rhaukos, Rhithymna, Sybrita, Tylisos, Thenai (?), and, from Roman times, Trajan, Hadrian, and Antoninus Pius.

HAROLD N. FOWLER.

JAHRBUCH D. K. DEUTSCHEN ARCHÄOLOGISCHEN INSTITUTS.
Vol. IV. No. 4. 1889.—F. HAUSER, *Marble Throne from Solunto* (8 cuts). Fragments of a leg of a throne and of a footstool are published and discussed. The leg was described by Serradifalco (*Antichità di Sicilia*, v, pl. 39, *cenni sugli avanzi dell'antica Solunto*, pl. 4) and Semper (*Stil*, 1², p. 413) as part of a candelabrum. The fragments are richly adorned. Where the crossbars joined the leg are reliefs representing (1) an armed warrior crowned by a Nikè, while at his other side stands a figure like Venus Genetrix, and (2) three draped female figures. The footstool rested upon lion-paws above which are lion-heads. The front and sides of the footstool were carved in relief. The four dancing Nikai on the throne of Zeus at Olympia occupied the position held by the frieze on the throne-leg from Solunto.—H. HEYDEMANN, *Homeric Representations on Vases* (pl. 10: 2 cuts). The front painting of a krater (*vaso a colonnette*) from Vulci is published (coll. Jatta, No. 412, *Catal. Jatta*, p. 152 f.). The vase belongs to the period of the Diadochoi. The back was adorned with three draped youths. On the front a richly-draped seated female figure is represented. She holds a child on her knees. Before her stands a long-haired warrior. He has on high laced boots, and about his loins an apron-like girdle. In his left hand he holds a shield and two spears. With his right hand he holds his crested helmet toward the child who is trying to reach it. Behind the seated figure stands a young warrior dressed in a chiton and high laced boots. He is taking off his sword, having already laid aside his shield and pilos. This is only a genre-scene, but the artist was under the influence of the Homeric description of Hektor's parting from Andromache. The same remark applies to the vase in the British Museum No. 418 (*Journ. Hell. Studies*, ix, 3, p. 11 f.). Monuments with representations of the Homeric scene are mentioned. The front painting of a second krater of about the same period, also from Vulci (*vaso a colonnette*, *Catal. Jatta*, p. 984 f, No. 1709, back adorned with three draped youths) is published. In the middle stands a long-haired warrior with spear and shield. He wears a scarf which passes over his left shoulder and is confined at the waist by a belt, leaving the ends free. He is about to kill an enemy who kneels before him (at the right). Behind the central figure (at the left) is a man bound to a tree. The scene represented is the rage of Achilles after the death of Patroklos, and the artist ap-

pears to have been influenced by the Homeric description of the death of Lykaon. A similar representation is found on a vase, the present fate of which is unknown, published by Passeri, *Pict. Etr.*, 256. The chief painting of a black-figured hydria from Etruria (*Bull. dell' Inst.*, 1843, p. 75 f. = *Arch. Ztg.*, 1843, p. 141; Overbeck, *Sagenkreis*, p. 466, 133) is published. A chariot is represented, to which two horses are harnessed. These are held by a bearded man in a long garment, while two nude men are bringing two more horses. A bearded, bald-headed man is mounting the chariot. Behind him stands a bearded man in Phrygian costume. The inscription seems to read Πάρις καλός. The scene may refer only in a general way to the Trojan war, or it may represent Priam about to depart to ransom Hektor.—G. TREU, *Arrangement of the Eastern Pediment of the Temple of Zeus at Olympia* (pls. 8, 9; plan; 20 cuts). All previous discussions of this subject are considered, including that of J. Six (*Journ. Hell. Stud.*, x, 1889, p. 98 ff.), which is treated in an appendix. The arrangement previously proposed by the writer is retained without change except that the female figures of the central group change places, the one which was formerly called Hippodameia being now called Sterope and *vice versa*, and that, behind the horses, chariots of appropriate size are introduced. The introduction of chariots brings the figures toward the corners nearer to each other. The interchange of the female figures is adopted from Studniczka. The arguments urged in opposition to this arrangement are answered by an elaborate discussion of the circumstances and positions in which the fragments were found, and the writer's conclusions are supported by careful examination and measurements of the fragments themselves. In spite of the fact that the seated and crouching figures of this pediment are mere genre-figures, the corner figures are still regarded as representations of Kladeos and Alpheios. So the name Kephisos is retained for the corresponding figure in the pediment of the Parthenon. The pediment of Olympia is discussed in its relation to those of the Parthenon and of the temple at Aigina, and is declared to stand nearer to that of Aigina.—*ARCHÄOLOGISCHER ANZEIGER* (*Supplement to the Jahrbuch*). REPORT OF THE MEETING OF GERMAN PHILOLOGISTS AND SCHOOLMEN at Görlitz, Oct. 1-5. There, O. Richter spoke of the care with which archaeological interests are regarded in the present changes in Rome; R. Förster spoke on the date of the Laokoön group, which he considers Hellenistic; A. Conze, on the archaeological institute and the gymnasia; R. Becker, on portraits of Livy; O. Rossbach, on the Temple of Diana at Nemi; A. Conze, on the Elgin collection at Broom Hall; K. Wernicke, on Greek fables relating to bulls; R. Engelmann, on the vase-painting *Mon. dell' Inst.*, xi, pl. 33; R. Förster, on various representations of the Laokoön; Th. Schreiber, on the gods of Alexandria; H. L. Ulrichs, on a

marble torso of Herakles and the hydra (Plin., xxxiv. 59); *O. Richter*, on the Capitoline plan of Rome; *M. Mayer*, on the relations of Greek-heathen and Christian dragon-slayers.—REPORTS OF MEETINGS OF THE ARCHÆOL. SOCIETY IN BERLIN, 1889. FEBRUARY. *Wilcken*, on the Hellenistic Portraits found in Egypt; *Curtius*, on the Chalkotheke on the Akropolis; *Assmann*, on the date of the large relief of the Palazzo Spada; *Grütner*, on technical peculiarities of the art of Praxiteles.—MARCH. *Robert*, on a vase-painting representing Theseus with Poseidon at the bottom of the sea (in the last number of *Museo Italiano*), adding a discussion of various mythologic questions; *Trendelenburg*, on the figure of a youth in a representation of the same scene on a sarcophagus; *Curtius* (and *Graef*) on the palaistra at Olympia; *Herrmann*, on the temples of Kypros; *Conze*, on a Roman sepulchral relief in Bukarest, with remarks by *Robert* and *Furtwängler*; a report was read from *C. Humann*, on a sarcophagus in Pergamon.—APRIL. *Puchstein*, on the gods in the Pergamene gigantomachia; *G. Hirschfeld*, on the second volume of the *Lykische Reisen*, and on the development of the Ionic alphabet; *Furtwängler*, on *Montelius*, *Civilization of Sweden in Heathen Times and Bronzæalder in Egypten*, on *Löschke*, *Aus der Unterwelt*, on *Hoffmann*, *Apollo Kitharōdos*, on the statue of a boy from the Akropolis and another statue of a boy in Rome, on a *Hermes* statue in Florence, and on the Eubouleus head of Praxiteles; *Böhlau*, on the hero Butes and the François vase.—MAY. *Kern*, on the vases of the Theban Kabirion; *Wilcken*, on Greek ostraka-literature from Egypt; *Curtius*, on the topography of Olympia; *Wernicke*, on several vase-paintings; *Conze*, on a painting in Schwerin.—JUNE. *Wernicke*, on inscriptions from the Akropolis; *Robert*, on Gorytos of Nikopolis, with remarks upon ancient painting and sculpture.—JULY. *Dörpfeld*, on the latest excavations on the Akropolis; *Furtwängler*, on *Flinders Petrie*, *Naukratis, part II*; *Lehfeld*, on the literature concerning the Roman monument at Schweinschied.—NOVEMBER. A letter from *Wilcken* on two fragments of papyrus found by *Flinders Petrie* near Hawara. The text is published with remarks. The fragments belong apparently to a description not of Sicily, as *Sayce* (in *Flinders Petrie*, *Hawara, Biahmu and Arinoo*, p. 28) thinks, but of Attika; *Treu*, on the Eastern Pediment at Olympia (remarks by *Curtius*); an article of terracotta from the Roman Viminacium was declared by *Graef* and *Engelmann* to be part of a tile-roof.—ACQUISITIONS OF THE MUSEUMS OF ANTIQUITIES IN GERMANY. III. *Dresden* (contin.). 60 cuts. 35 Greek terracottas, 200 terracottas and 8 terracotta beads from Tarentum, 53 votive-offerings to gods of healing, 14 other terracottas from Italy, 52 utensils, lamps, etc., of terracotta, besides a great number of fragments, all adorned with relief, 18 painted vases of various styles, 9 objects (rings,

etc.) of gold and silver, a large number of seals and gems (nearly 100), 8 votive figures and 3 other objects of tin and lead, 13 objects of carved bone besides pins and fragments, objects from a grave in the Vigna Ribaltano (9 numbers described in *Bull. dell' Inst.*, 1882, p. 242 ff.).—iv. *Stuttgart. Royal Collection of Antiquities.* Round stone table from Bis-singen, fragment of mosaic from Rottenburg, a number of gilded bronze letters from near Gmünd, the collection of Colonel v. Wundt consisting of about 400 objects comprising small bronzes, vases, terracottas and small works in marble. This collection is to be divided between the royal collection at Stuttgart and the archaeological cabinet of the university of Tübingen. The genuineness of some of the objects is doubtful.—v. *Hanover.* The Kestner Museum was opened Nov. 9, 1889. Most of the objects in the museum were collected by August Kestner, who lived in Rome from 1817 until 1853. They consist of (1) Egyptian stelai, sepul-cral figures, vases, bronzes, scarabaei, utensils, etc., and a part of a papy-rus *Book of the dead*, (2) Greek and Etruscan vases (50 *bucchero* vases and a number of Greek painted vases), besides a great number of Roman vases, (3) terracottas (a number of "Campana-reliefs," about 20 statuettes, and some tiles, etc.), (4) over 300 lamps, (5) a number of bronzes, (6) gold ornaments, rings, etc., (7) Tesserae described by Henzen, *Mon. dell. Inst.*, iv, 1848, pls. 52, 53, (8) coins, Greek from Sicily and Lower Italy, Roman from the earliest to Byzantine times, (9) about 1000 cut stones and 600 "pasten."—vi. *Cassel.* 28 vases, chiefly aryballoi, and two fragments of a breastplate (2 cuts).—vii. *The Collections of Antiquities in Western Germany. Metz.* Marble bust of the so-called dying Alexander, a counter-feit inscription by Boissard. *Mannheim.* Part of a so-called altar of four gods from near Heidelberg. *Homburg.* 3 iron utensils. *Wiesbaden.* 4 doll's utensils of clay from Cologne, a glass goblet with high foot and chickens of terracotta from Maifeld. *Speyer.* Roman remains at Blies-dalheim and Kreimbach have been excavated. The museum has acquired two equestrian statues of sandstone from Breilfurt, a bronze wagon-pole-head from Eisenberg. *Worms.* Roman graves and buildings have been excavated. The museum has acquired: an altar of four gods, a sculptured drum of a column, a serpent's body, a bearded head with a garland, a sword and sheath, a lamp, several amber objects, some ancient silver spoons, a silver pin and silver ring. *Mainz.* 36 graves have been opened in which 68 glasses and some gold beads were found. Two gravestones have reliefs and inscriptions. The museum has further acquired two iron tools, a bronze fish-tail, a statuette of a dwarf, a few terracotta ex-votos. *Trier.* Roman buildings and mosaics have been laid bare. Acquisitions: six inscriptions, three reliefs, a bronze Apollo statuette, a bronze pedestal with inscription. *Cologne.* 3 inscriptions.—REPORT FROM THE VON

WAGNER'SCHEN KUNSTINSTITUT OF THE UNIVERSITY WÜRZBURG (by H. L. Ulrichs). The relief *Mon. and Ann. dell' Inst.*, 1856, p. 29, pl. 5 (Overbeck, *Kunstmyth. Atlas*, pl. 1, No. 48) has disappeared: a cast of it exists in Würzburg, and is here described and discussed.—FROM NORTHERN FRANCE (M. Mayer). The Panckoucke collection of vases is now in Boulogne-sur-Mer. The catalogue contains 419 numbers but does not entirely agree with the collection in its present condition. Many of the vases are here briefly described.—NEWS OF THE INSTITUTE.—NOTES TO THE PUBLICATIONS OF THE INSTITUTE. E. Fabricius discusses the market building at Alinda with reference to Trémarx, *Exploration archéologique en Asie Mineure* (cut); F. Hauser discusses the position of the so-called "Narcisso;" H. Heydemann discusses the bull of Tiryns in connection with a similar representation on a gem in his collection (cut). The man above the bull is not a *daimon* but the driver of the bull awkwardly represented.—BIBLIOGRAPHY.—INDEX. HAROLD S. FOWLER.

JOURNAL ASIATIQUE. Feb.-March. 1890.—E. SÉNAET, *Notes on Indian Epigraphy*. III. *Some Indo-Bactrian monuments*. All the monuments here noticed come from the region of the Yuzufzais on the north bank of the river of Kabul, belong to the same period, are interrelated, and are now all in the museum of Lahore. There are three inscriptions, in Indo-Bactrian characters, very valuable for this obscure branch of Indian Epigraphy. No. 2 alone is inédit; the others have been imperfectly published. No. 1 is called the inscription of *Takht-i-Bahi*: cf. *Journ. Roy. As. Soc.*, new ser. v, p. 376 *seq.*, and *Archæol. Survey*, vol. III, p. 58. It contains a votive formula, and is dated from the year 26 of the reign of King Gudupharas, the year 103 of the continuous era. This, according to the general acceptance, would place this inscription in the first century A. D. No. 2 is also a votive inscription of less length dated in the year 68 of the era. No. 3 is of extremely difficult interpretation. II. *Statues of Sikri*. Excavations conducted by Captain Deane at Sikri, near the famous ruins of Takht-i-Bahi and Jamalgarhi, brought to light some Greco-Buddhist sculptures of extreme interest, to which attention has already been called in this Journal (pp. 179, 331). The phototype plates of two of them, here given, are sufficient to indicate the general style of them all. The religious buildings discovered are like those of Jamalgarhi. The statue of Buddha was placed in one of the niches arranged within the encircling walls. The other statues were placed in like manner or on the platforms. The statues illustrated are carved in a schistous stone of dark-blue color: that of Buddha is 2 ft. 8½ ins. high, the other is 3 ft. ¼ in. high. Both are in good condition. Buddha is seated cross-legged, in a meditative attitude, with a large nimbus, and the *arṇā* between his eyes. But it is Buddha before the *bodhi*,

in a terrible condition of emaciation and weakness, the bones, muscles and veins standing out in high relief. The basrelief on the base shows western influence more distinctly; it represents fire-worship, and the small figures are quite in the usual style of Græco-Buddhic reliefs. Western influence is still more evident in the second figure, which is difficult to identify. It is a standing female figure carrying three children, one on each shoulder and a third, supported by her right arm, to which she is giving suck. The headdress and the crown encircling it have a classic aspect, though the rest of the attire is Indian. The influence exercised on India by Hellenic art as early as the time of the Seleucidae and the Greek kingdom of Bactriana is shown by the coinage. But only at Amrāvati is classic influence shown so clearly as to be universally granted. The art of the Northwest shows its western origin in many ways, and even the iconography of Buddha as it appears at Amrāvati betrays this origin. These Amrāvati works date apparently from the second century A. D., and are the latest that show this classic influence. The statues of Sikri are considerably earlier. They may be connected with the inscriptions mentioned above, two of which appear to date from the first century A. D. It is with the names of Goudophares and Kanishka that one is inclined to connect these sculptures. In this connection, it is suggested that their types may have an Iranian origin, spread by the Parthian dynasty. The final conclusion is, that we know of two phases of classic influence upon India, (1) one partial and indirect, of which the Sikri sculptures are examples; (2) later, one stronger and direct, exemplified at Amrāvati.—JAMES DARMESTETER, *The great inscription of Kandahar*. This is an important contribution to the knowledge of the Mussulman epigraphy of Afghanistan. The part of the citadel at Kandahar where the inscriptions are placed is thus described by Dr. Bellevue in 1857: "On a rock, between two crumbling towers, is a stairway of forty steps that leads to a rock-chamber; at its entrance, to the right and left, is a life-size crouching leopard. The whole is cut in the calcareous rock and is said to have occupied seventy men nine years. The chamber is bow-shaped and dome-roofed. . . . Its inner walls are covered with inscriptions cut in relief of fine work and said to have occupied the artist four years." In reality, the inscribed matter consists of a number of independent inscriptions. The first part dates from the Great Mogul Sultan Bābar and relates how, on Sept. 6, 1522, the emperor Bābar took Kandahar, and, the same year, ordered to be carved in this rock a monument to commemorate this conquest: this was executed in five years under the direction of the prince royal Kāmrān, governor of Kandahar, and was finished in 1526-27. The taking of Kandahar formed the turning point in Bābar's romantic career, and consequently in the history of India, as it made possible the foundation of the Empire of the Great Mogul. The

second part of the inscription dates from the time after Bâbar's death, when one of his four sons, Mirza Askari, was governor of Kandahar, in the years between 937-9. Then the inscription changes character. It skips over seventy years into the reign of the Emperor Akbar and the years 1556-1605: it is not official but the work of a courtier, the object being to indicate the vicissitudes of Kandahar from Bâbar to Akbar, to enumerate the provinces in Akbar's dominions, and to make a personal puff. The composer thereof, Mir Maçûm, is known as a poet and historian and as a skilled composer of inscriptions.

A. L. F., JR.

MITTHEILUNGEN D. K. DEUT. ARCHÄOLOGISCHEN INSTITUTS. ATHENISCHE ABTHEILUNG. Vol. XIV. No. 3. 1889.—E. REISCH, *The Drawings of Ciriacus in the Codex Barberini of Giuliano di San Gallo*. The drawings in this codex are all by Giuliano, only the titles being by his son Francesco. All the drawings of Greek monuments are copied from Ciriacus except the ground-plan on fol. 32, which is an arbitrary reconstruction of some building. The drawings of Ciriacus represent: one of the Atlantes of the so-called porch of the giants (fol. 27); St. Sophia; a Nereid floating above the water; two stelai with Corinthian capitals, one of which has the inscription *CIG*, 587; the Parthenon (Laborde, *Athènes* I, p. 32), and the portal of Hadrian's aqueduct; ruins of Pleurou, Kalydon, Nikopolis, Argos Amphiloehikon, Azylea, Delphi, Lebadeia, and Eretria (fol. 28); three architraves with the inscription *CIG*, 1298, which rest upon two Corinthian columns, while the drawing of the statue on the monument of Thrasyllus is inserted in the gate-like building thus formed; the Olympieion with eleven columns; the choregic inscription of Thrasyllus; the monument of Philopappos; the "tower of the winds;" the lion now before the arsenal in Venice; the ruins of two round towers of squared stones; a wall with two towers and a gate; a chair; a number of architectural fragments; part of an aqueduct; further walls and fragments (fol. 29). Many of these are without any hint of their *provenance*, others have titles showing that they are from Athens, the Peiræus, and other places.—H. G. LOLLING, *The Sanctuary of Artemis near Antikyra* (pl. 7). Pausanias (x. 37. 1) mentions a sanctuary of Artemis to the right of Antikyra. This is found on a peninsula on the northern side of Mt. Kephalî. The vertical side of the rock is smoothed in the form of a temple-front about 8.50 met. wide. Niches in the wall were for votive offerings. This seems to have constituted the primitive sanctuary, though at some time a building (part of the foundations of which is preserved) was built out from the rock. The sanctuary had a peribolos. Two fragmentary inscriptions are given, upon one of which is the name Artemis.—E. PETERSEN, *Protection against Birds*. On the upper side of projecting parts of the metopes of

Olympia are holes which have been explained as serving to aid in the adjustment of the figures. These are now explained as the holes in which metal forks were fastened to keep birds away from the sculptures. A fork of this kind is still in place on a tile from Caere, and other Italian tiles show traces of this kind of protection. Passages in the *Ion* of Euripides show that care was taken to keep birds away from the sculptured adornment of temples.—C. CICHORIUS, *Inscriptions from Asia Minor*. 40 inscriptions are published. 13 are from Bithynia, 9 from Mysia, 18 from Lesbos, (14 from Mytilene, 4 from Eresos). The inscriptions are sepulchral and dedicatory, including also fragments of decrees and (from Lesbos) a fragmentary list of names. All are of comparatively late date.—P. WOLTERS, *Mykenian Vases from northern Greece* (pls. 8–11). Pre-Hellenic graves near Volo in the form of chambers about 2 m. square and 1.50 m. high, with stone walls and ceilings, are described. Vases from these graves are published and described. They belong to the Mykenian style. A vase is described which belongs to a different class, resembling the vases with geometric adornment found near the *Tumba* of Dimini. Similar graves near Antikyra in Phokis are described. Perhaps these graves mark the site of the ancient Medeon (Pausanias, x. 36. 6). Mykenian vases are said to have been found in these tombs.—J. STREYGOWSKI, *The Akropolis in Early Byzantine times* (9 cuts). The Parthenon was probably transformed into a Christian church about 435 A. D., dedicated probably to St. Sophia. In the tenth century the church was dedicated to the Virgin, possibly because it contained the portrait said to be the work of St. Luke. The portrait may have been placed there when the bishop took possession of the Akropolis, which may have been in 662 when Constant II visited Athens. By "Early Byzantine" times the period is meant which centres about the time of Justinian, and ends apparently with the time of the iconoclasts. The forms of architectural members are in the fourth century entirely antique, Corinthian and composite capitals in the Roman manner. In the fifth century variations are frequent. Between the capital and the archivolt a block (*Kapitellhimpfer*) is inserted which seems to be a remnant of the ancient architrave. The acanthus leaves begin to take a thick form with incised edges (*fett und zackig*). Capitals of these forms from Ravenna, Constantinople, and elsewhere are discussed. On the Akropolis, in the Stoa of Hadrian, in Prevesa, Chalkis, Argos, Akrokorinthos and elsewhere in Greece, capitals and architectural ornaments are found which show that Greece took part in the development of Byzantine architecture. It appears, however, that Christian buildings on the Akropolis were not begun before Theodosius II.—G. TREU, *On the Eastern Pediment at Olympia* (cut). B. Græf (*Mith.*, XIII, 402) says that the head assigned by Treu to the kneeling girl (*o*) belongs to the kneeling boy

(*z*), that assigned to the kneeling boy (*s*) to the kneeling man (*c*), and the head from a metope (*Ausgr.*, IV, pl. 11) is a male head and belongs to Herakles. All these assertions are combated, and a correction of Treu's previous views concerning the fastening of the head of the kneeling boy is made.—G. TREU, *On the Gravestone of Metrodoros from Chios*. *Studniczka (Mitth.*, XIII, 160) thinks that the roughened front of this stone was not painted. The opinion is here advanced that it was adorned with a colored painting of the deceased. Comparison with a late Thessalian relief in Berlin (Coll. Sabouroff, vignette in text to pl. 38) supports this opinion.—W. DÖRFFELD, *Chalkothek and Ergane-temple*. The s. w. part of the Akropolis is divided into three terraces. It has been generally supposed that a temple of Athena Ergane stood on the middle terrace. It is here shown that neither inscriptions nor Paus., I, 24, 3 prove the existence of such a temple. The middle terrace was divided from the precinct of Artemis Brauronia by a portico which faced the west and offered a solid wall to the middle terrace. A broad flight of steps connected the middle terrace with that upon which the Parthenon stands. The southern part of the middle terrace was occupied by a building about 41 met. long (from east to west) and 15 met. deep. The back of this building was built against the southern wall of the Akropolis. In front of the building was a portico 3.5 met. deep. Only foundations of this building have been found. This building cannot have been a temple on account of its shape and dimensions. Of all the ruins on the Akropolis, this agrees best with what is known of the Chalkothek. The existence of the Chalkothek at this point shows that there was no temple of Ergane.—MISCELLANIES. J. H. MORDTMANN, *Addenda to Vol. XII, p. 168 ff.* Notes and corrections on a series of inscriptions from Asia.—A. E. KONTOLEON, *An unpublished Inscription of Kolophon*. The inscription (on a jar) reads Ἐν Λεωφάρων Λάμπρον, ἄθλον ἐν Λαμφάκων.—A. E. KONTOLEON, *Inscription of Magnesia on the Maiandros*. The inscription published in the Ἀρμυρία No. 1677 and *Bull. de corr. hellén.*, XII, p. 328 is republished. It records a decree in honor of Tiberius Claudius Tyrannus.—B. GRAEF, *The Painting of the Nike of Archermos* (cut). On the left-side of this figure are traces of ornamentation which make it not improbable that the clothing of the whole upper part of the body was covered with a pattern of circles and semicircles.—P. WOLTERS, *Inscription from the Dionysiac Theatre* (facsimile). Fragments of an inscription found in 1886 supplement *CIA*, III, I, p. 86, 316, 317. The entire inscription reads Ἱερῆας Ἑστίας ἐν Ἀκροπόλει καὶ Λαβίας καὶ Ἰουλίᾳ(ς), with the name Φελαίνων written above. The cult of Hestia on the Akropolis is new. The priestess of Hestia seems to have had charge of the worship of Livia and Julia.—LITERATURE.—DISCOVERIES (see *News*).

No. 4.—A. SCHNEIDER, *Vase of Xenokles and Kleisophos* (pls. 13, 14; two cuts). The excavations carried on by the German Institute in the Dionysiac theatre in February and March of 1889 brought to light a variety of terracottas, bronzes, etc., but the chief importance belongs to fragments of pottery. These belong to various styles, Mykenian, orientizing, Corinthian, black-figured and red-figured. Some fragments of Panathenaic *amphorae* and of flat vases in the manner of Tleson were found. The red-figured technique is represented by about 25 fragments, all as early as 450 B. C. Youthful figures after the manner of the circle of Epiktetos are represented, along with various ornaments. One fragment has the head of a river-god to whom a cup is offered. The most important vase is an *oenochoe* with trefoil opening. Almost the entire vase is preserved, though much broken. On the front of the vase seven more or less naked men are engaged in a drunken carouse about a krater. The inscription reads Χερνοκλῆς: Κλῆσοφος and, separated from these names as well as from each other, the words ἐποίησεν and ἔγραψεν. The thirteen known vases of Xenokles are all *tazze* (*schalen*), some with mere inscriptions, others adorned with figures of youths riding on horseback or *hippalektryon*, rows of animals, sirens and mythological persons. All this is in marked opposition to the representation on this new vase. The free style of the new vase is also very different from that of Xenokles as hitherto known. This vase belongs to the last creations of the black-figured style, and shows that alongside of the earliest red-figured vases there existed black-figured vases painted in a free and spirited manner. The painting of this vase must be attributed rather to Kleisophos than to Xenokles.—AD. MICHAELIS, *The Date of the Rebuilding of the Temple of Polias in Athens* (cut). In 1888 a new fragment of the account of expenses for rebuilding this temple was found (*Mith.*, 1888, p. 229 ff.; *Δελτιον*, 1888, p. 87 ff.; *Berl. phil. Woch.*, 1888, p. 1257 f.). This fragment mentions blocks of the tympana and other portions of the upper part and roof of the building, showing that it was approaching completion. In connection with the earlier fragments, this part of the account makes it probable that the building was finished in the summer of 408 B. C. In the earliest fragment of the account, various blocks are mentioned as partly finished and ready to be put in place. This shows that the work of building had been suddenly interrupted. The most probable date for this interruption is 413 B. C., when Dekeleia was fortified and the Sicilian expedition came to a disastrous close. The work was taken up again in 409. It must have been begun some time before 413, probably in the years of comparative quiet after the peace of Nikias. The balustrade of the temple of Athena Niké is assigned to the same period, about 420.—W. JUDICH, *Olympus*. Nine new inscriptions are published, which the writer in com-

pany with F. Winter found in the summer of 1887 an hour and a half north of the ancient Mylasa. The inscriptions are cut in blocks which seem to have belonged to a building of Hellenistic times: about 100 B. C. Nos. 1-2 are records of purchase and lease, the contracting parties being the representatives of the city-divinities Apollo and Artemis on the one hand and private citizens on the other. These inscriptions belong with LeBas-Wadd., Nos. 326, 327. Nos. 3-4 are of similar character. Nos. 5-6, also of similar character, belong with LeBas-Wadd., Nos. 331, 332. Nos. 7-8 also are parts of psephismata relating to purchase and lease, but the characters used show that they do not belong together. No. 9 is a fragment of a similar psephisma. The inscriptions LeBas-Wadd., Nos. 326, 327, 331, 332, 339 are republished with corrections.—A. BRÜCKNER, *An Equestrian Monument from the Peloponnesian War* (pl. 12, cut). A relief from Eleusis is published. The inscription reads—σ' Ἐπιζήλο ιε. αρχε, which is completed: Πυθόδωρος]ε Ἐπιζήλο(ν) ιεπαρχε[σας τοῖν θεοῖν. This Pythodoros is identified with the commander of the Athenian fleet in 414/13, the *choregos* of 415, and the oligarch of 412, probably also with the Πυθόδωρος Ἀλαϊεύς who was *ταμίας τῆς θεοῦ* in 418/17. The exact date of the occurrence which led to the dedication of this relief is left undetermined. The fragment now extant is broken off at both sides. Two rows of figures are represented, one above the other, divided by a curved ridge which is supposed to represent uneven ground. In both rows cavalry coming from the right are overcoming infantry fleeing toward the left. The figures were made with great care and originally parts of the armor and trappings were of bronze. An arrangement of figures in two rows, one above the other, with all the Athenians on one side and all their opponents on the other, is proposed also for the relief in honor of the cavalry slain at Corinth, the inscribed *akroterion* of which is in the National Museum at Athens (Kabbadias, *Katal. τοῦ Κετ. Μουσείου*, N. 163 a; *CIA*, II, 3, 1673; Hicks, *Greek histor. Inscr.*, No. 68).—MISCELLANIES. H. SCHLIEHMANN, *Inscriptions from Ilios*. Two inscriptions. The first is a fragment of a decree (apparently honorary) of Hellenistic times, the second reads *Μητρόβιος Μητρόβιου*.—N. NOVOSADSKY, *Supplement to CIA*, I, I. A new fragment of this inscription, which still, however, remains fragmentary. It now appears that, in the first half of the fifth century B. C., those who were initiated to the lesser Eleusinian mysteries paid the hierophant one obol each.—A. S. DIAMANTARAS, *Ancient Sepulchral Inscription in Myra of Lycia*. This inscription provides that besides Synergos of Myra only Anthousa of Arnea shall be laid in the inscribed tomb. If any one else be buried therein he shall pay to the people three *kitharephoroi* (coins stamped with a lyre).—DISCOVERIES.—REPORTS.

HAROLD N. FOWLER.

PROCEEDINGS OF THE SOCIETY OF BIBLICAL ARCHÆOLOGY.
1890. January.—ROBERT BROWN, JR., *Remarks on the Tablet of the Thirty Stars*. 1. The Tablet *WAI*, v, 46, No. 1, written in the Babylonian cuneiform, is of great interest in connection with archaic astronomy and stellar mythology. It is divided into three parts. *Part I* (lines 1-38), including the obverse and the first two lines of the reverse, is in two columns, the first of which gives the names of thirty stars, and the second gives their regent divinities. *Part II* (lines 39-53) also is divided into two columns, the first of which gives a further star-list, and the second adds some remarks and explanations. At the head of this second star-list stand *Sakvian* (Mercury), *Dilbat* (Venus), *Lubat* (Jupiter), and *Nibatanu* (Mars). *Part III* (lines 54-64) consists of text, not in columns but in two divisions. According to Diodoros, the Babylonian heaven was divided into three parts: (1) a central portion, roughly corresponding with the ecliptic, in which moved sun, moon, and the five planets, and under the orbit of these they say that thirty stars, which they denominate "divinities of the council" have been marshalled. These are the thirty stars of this tablet. (2) A northern portion, occupied by twelve stars called by Diodoros "chiefs;" and (3) a southern portion, also occupied by twelve stars similarly named; and they say that the chiefs of the divinities [of the council] are twelve in number, to each of whom they assign a month and one of the twelve signs of the Zodiac. Here, the writer remarks, we see a combination and harmonization of two distinct systems, solar and lunar, and also, apparently, Shemitic and Sumero-Akkadian. The sphere of the thirty stars was equivalent to that of the twelve signs, and the former concept was rather Sumero-Akkadian, the latter, Shemitic. In a combination of the two divisions and systems, twelve of the thirty necessarily became chiefs. The stars named in the list in Part II of the tablet are not placed in uranographic order, but the Thirty Stars appear to be, at least approximately. This is their order. 1. The Star of the Foundation—the god Sar. xxx. The Star Makhar, i. e., the Star of the He-goat-fish—the god Nebo and the god Urmetum. xxix. The Star of the Proclamation of the Sea. By means of the constellation of the Goat-Fish [=Capricornus], with its adjoining stars of the *Sea*, the *Fish*, and the *Foundation*, we are enabled to determine the beginning and the end of the Thirty Stars, and we further observe that this beginning indicates a year commencing at the winter solstice.

February.—E. DE BUNSEN, *The Pharaohs of Moses according to Hebrew and Egyptian Chronology*. This is an attempt to prove that Ahmes, the founder of the XVIII dynasty, was the Pharaoh of the oppression, and Amenophis I the Pharaoh of the Exodus, and that, consequently, Moses lived about 250 years earlier than hitherto supposed. M. Bunsen's chrono-

logy is: B. C. 4620, Possible accession of Menes. 2360, The Flood. 1993, Emigration of Hebrews under Abraham from Haran to Egypt, and commencement of their bondage. 1593, Expulsion of the Hyksos from Egypt, and end of Hebrew servitude. 1563, Exodus of the Hebrews under Moses, etc.—A. L. LEWIS, *Some suggestions respecting the Exodus*. This summarizes the different opinions as to the date and Pharaohs of the Exodus, beside the generally received one of Rameses II and Menephtah. The opinions quoted are those of Mr. Cooper, who favors Tahutmes II as the king, and 1515 as the date, of the Exodus; of Mr. Burnett, who fixes upon Apachnas and the year 1665; of Mr. Schwartz, who selects Tahutmes III and 1438 B. C.; and, finally, of M. de Bunsen, with Amenhotep I and 1563 B. C. The writer's own conjecture is then given, namely, that the Exodus took place at the end of the reign of Horemhebi or Ramessu I and that Amenhotep IV was the oppressor.—ROBERT BROWN, JR., *Remarks on the Tablet of the Thirty Stars*. Part II. II. The Star of the Hyæna—the god Anu. III. The Star of the Scimitar—the weapon of the hand of Merodach. IV. The Star of the Great Twins. V. The Star of the Little Twins—the goddess Sidu and the goddess Nin-Sar [=Istar]. VI. The Star of the King—Merodach. VII. The Star the River of waters—the Fire-god, the prince. VIII. The Star of the Crossing dog—the goddess Nana. IX. The Star Yoke of the Enclosure of Anu, prince of the heaven, great. X. The Star Son of the Supreme temple—the divine Judge. XI. The Star Wood-of-light, that shines before Bel-the-Confronter. XII. The Star Fire-flame, time of the House of the East. XIII. The Star of the god Kua, time of the House of the East. XIV. The Star the Colossus, the burning of fire of the goddess Bahu. XV. The Star Lady of heaven [Nin-Sar], and the god of the Great City. Nergal and the Double-one of Evening [=Istar] = *Virgo*. XVI. The Star of the Hero, the god Sky-furrow—Anu. XVII. The Star of the Animal from the East. The god Rimmon is terrible [or the great Storm-bird] = *Corvus*. XVIII. The Star of the Stag—Ursa Major. XIX. The Star Man of fire, and the god Latarak—the Moon and Nergal. XX. The Star the Lady, Might of Babylon (Tintirki) = *Spica*. XXI. The Star of the Tip of the Tail—the god the creator: in *Libra* [at the end of the great serpent's tail]. XXII. The Star the Tree, Light of the hero, weapon of Ea, which in the midst of the abyss he placed. The falchion, the weapon of the hand of Merodach. XXIII. The Star the Hero, the king—the Lord of seed; (in) the month Tisri the Lusty King [Lugal-tadda]. XXIV. The Star Man-of-death; the corpse, the fever. XXV. The Star of the snake—the goddess Queen of the Great Region [Nin-ki-gal]—Nebo and the king (Merodach)—the god Samas and the god Raman. XXVI. The Star of the Scorpion—the goddess Iakhara of the Sea [=Istar]. The director of Fire [Sar-ur] and the Director of Sacrifice [Sar-gas].

xxvii. The Star Beast of death, the god Kush, god of the Great Country [= *Lupus*]. xxviii. The Star of Anunit and the Star of Sinuntu. The commentary on the text is extremely ingenious.—C. J. BALL, *The new Accadian*.

March.—J. H. GLADSTONE, *Copper and Bronze of Ancient Egypt and Assyria*. A summary of this paper is given in JOURNAL, v, p. 157.—G. MASPERO, *The meaning of the words Nouit and Hatt, etc.*—C. J. BALL, *The new Accadian*.
A. L. F., JR.

REVUE ARCHÉOLOGIQUE. 1889. July–August.—M. DELOCHE, *Study on some seals and rings of the Merovingian period* (contin.). LXXX. Engagement or marriage ring of Marcus and Nivia. This is a gold ring found on the grounds of the ancient collegiate church at Angers. It has two bezils, one inscribed MARCO, the other NIVIA. It may be dated from the middle of the VII century. LXXXI. Seal-ring of Antoninus. This is a gold ring found at Craon (Mayenne). On the bezil is engraved a bust, and around this the inscription ANTONINOS. LXXXII. Seal-ring found at Martigné-Briant (Marne-et-Loire). This is a silver ring found in 1870, with monogram which is read ALMARETVS or AMALRETVS. LXXXIII. Seal-ring from the excavations in Ralliement Place at Angers. This is a bronze ring with monogram which is read + MARIOSE. LXXXIV. Seal-ring of Junianus. This inedited bronze ring was found at Saint-Pierre-du-Lac (Marne-et-Loire). The monogram is read IVNIANVS. LXXXV. Seal-ring of Abto. This gold ring is in the Cabinet des Médailles of the Bibliothèque nationale. On the bezil is inscribed a bird and the name ABTO. LXXXVI. Inedited seal-ring in the Cabinet des Médailles. This is a gold ring with monogram which is read GLANICE S(ignum). LXXXVII. Seal-ring found near Travecy (Aisne). This is a bronze ring found between Travecy and Vendeuil, with monogram which is read + GELOSIMI. LXXXVIII. Seal-ring of Una. This is a bronze ring found at Charnay (Saône-et-Loire) with monogram which is read S(ignum) VNE.—V. J. VAILLANT, *Roman glass from Boulogne-sur-Mer* (pl. xiv, xv). From June 1888–March 1889, there was discovered a large quantity of Gallo-Roman glass at Boulogne. Objects of various kinds were represented; amongst them three pieces of extraordinary character. One is a vase, its body representing a *Janus bifrons*, above which is a spreading conical receptacle. A second vase is in the form of a woman, from its extraordinary features apparently a caricature. The third vase is in the form of a bird.—PH. BERGER, *Ceramic Inscriptions from the Carthaginian necropolis at Hadrumetum*. The Carthaginian necropolis at Soussa in Tunisia, the site of the ancient Hadrumetum, has furnished more than twenty inscriptions. The arrangement of the tombs is quite uniform.

They are excavated from the tufa in groups, are oriented, and in general contain merely urns filled with human bones, and a quantity of smaller vases. The inscriptions are in cursive characters and painted upon the urns. Three are published here; one of them is rendered: "[urn] for the bones of Abdmelquart, counsellor, citizen of Sidon, [servant] of Abdmelquart. Sillec erected this to him, having been appointed over . . . for ever."—E. DROUIN, *The Era of Yazdegerd and the Persian calendar* (contin.). The important facts for the Persian period are the following: adoption by the Persians of the Avestan calendar about 450 B. C.; borrowing of the *epagomenes* from Egypt about the same time; introduction of the Persian calendar into Kappadokia and Armenia about the year 400; borrowing, from the Chaldeans, of the 13th intercalary month in 309. This completely reorganized calendar was used through the Sassanian period.—P. MONCEAUX and V. LALOUX, *Restoration of the Pediments at Olympia* (plates XVI–XXI). This article is an extract from the work of MM. Monceaux and Laloux, *Restauration d'Olympie*, a book which contains some attractive illustrations, but is otherwise of little scientific interest.—J. A. BLANCHET, *Ancient theatrical and other Tesserae* (contin.). Tesserae of various classes are here treated. Some contain representations of buildings or parts of buildings, others seem to have been used for athletic games and races. Those which contain both Latin and Greek numerals are then considered.—S. REINACH, *Chronique d'Orient*. The sixty pages under this title are almost entirely devoted to classical archaeology. Amongst the most important sections of this interesting summary are the notices of antiquities transported to the Central Museum at Athens, and of archaeological news from Eleusis, Ikaria, Mykenai, Epidauros, Delphi, Chios, Delos, Kypros, Phrygia, Tell-el-Amarna, and Arsinoë. Most of these items are included in the *News* of the JOURNAL.—BUHOT DE KERSEB, *Monumental Statistics of the department of the Cher*. This is a concise statement of the architectural peculiarities of the monuments of the xv and xvi centuries found in this district.—MISCELLANIES. *Monthly Bulletin of the Academy of Inscriptions*.—*Proceedings of the National Society of Antiquaries of France*.—*Archæological News and Correspondence*.—BIBLIOGRAPHY. A review (by L. LEGER) is here given of J. TOLSTOÏ and N. KONDAKOV, *Les antiquités russes dans les monuments de l'art* (1st fascicule).—SUPPLEMENT. R. CAGNAT, *Review of Epigraphic Publications relating to Roman Antiquity*.

September–October.—J. DE MORGAN, *Note on the use of the Assyrian system of weights in Armenian Russia in prehistoric times*. In the prehistoric tombs near Gok-tehai were found numerous bronze bracelets and ornamented rings, which appear to have been not jewelry but money. This opinion seems confirmed by the discovery in a tomb at Akthala of

8 heavy bronze rings at the feet of the body. Together, the rings weighed 4 kilog. 520 grammes. That a man should have worn rings weighing 2 kilog. 260 grammes on each ankle seems incredible. A careful study of the weights of these rings shows a close correspondence with the Assyrian *shekel*, at least as far as 24 multiples of the unit. Other rings from the Caucasus, now at the museum at St.-Germain, exhibit the same correspondences. The other rings and objects which might have been employed as weights discovered in other parts of Europe and now at St.-Germain do not exhibit any such correspondence with the Assyrian *shekel*.—P. DU CHATELLIER, *The Treasure of St.-Pabu*. Outside the town of St.-Pabu, in the canton of Ploudalmézeau (Finistère) there were discovered, in February 1889, ten or eleven thousand Roman coins dating from 260–360 A. D., and a silver cup, patera, and vase. In the neighboring village of Lanrivoaré were discovered two gold bracelets of Gallic type, and further west at Pont-l'Abbé several hundred Roman bronze coins. The coins were probably destined to be the pay of Roman soldiers stationed in this district and buried before their defeat.—C. MAUSS, *Note on the sketch of the plan of the Mosque of Omar, published in June–July 1888*. Supposing that the diameter of the outer circle of the Mosque of Omar was 100 units or feet, we find the value of the foot to be $= 0^m 3658^{mm}$, from which we derive the cubit $= 0^m 543^{mm}$, which indicates the use of the Ptolemaic system. In the Middle Ages, this unit of measure was called the foot of Christ.—P. BERGER, *Ceramic Inscriptions from the Carthaginian nekropolis at Hadrumetum* (contin. and end). Eighteen inscriptions from vases are here published. They are in cursive characters, and illustrate the transitional stage from the Carthaginian to the Neo-Carthaginian alphabet. This places them in the second century B. C., or in the early first century. They show that from the beginning of Roman domination, perhaps earlier, cremation was practised at least in some centres of Carthaginian influence.—E. DROUIN, *The Era of Yezdegerd and the Persian calendar* (contin. and end). After presenting the conclusions already reached, the question is raised, whether the Persians had two current and parallel years which coincided only once in 1440 years. This is decided in the negative. The foundation of the era of Yezdegerd, the reforms of Yezdegerd and Djelâl-eddin, and the Parsee calendar are then considered.—J. A. BLANCHET, *Ancient theatrical and other Tesserae* (contin. and end). A continuation of the catalogue of tesserae with Greek numerals, to which are added those with Latin numerals, tesserae with only numerals, and those with only figured types or with inscriptions only.—M. R. DE LA BLANCHÈRE, *Provincial Art in Roman Africa*. As there were many dialects of the Latin language, so there are corresponding varieties of provincial Roman art. Africa furnishes an excellent field for

studies of this character. We find there abundant instances of an art semi-Roman semi-Carthaginian in character. Especially as we turn from public monuments and from the cities to the industrial arts and to the country, the un-Romanized characteristics become evident.—G. BARST, *The Tomb of Saint Quentin*. St. Quentin was the first saint whose remains were exhumed in order that a more dignified monument might be made by St. Éloi. The caskets which may have contained his remains have disappeared, but it is certain that the sarcophagus in the crypt of the collegiate church of St. Quentin is not the tomb made by St. Éloi, which was adorned with gold, silver and precious stones.—A. BAUX, *Note on Sardinian workmanship in copper*. The object of this paper is to show, from the investigations made by the late Léon Gouin, that Sardinian copper instruments did not result from artificial fusion of bronze, but were founded from native copper, the mines of which must have been more extensive in antiquity than they are at the present day.—MISCELLANIES. *Monthly Bulletin of the Academy of Inscriptions*.—*Archæological News and Correspondence*.—BIBLIOGRAPHY. Reviews of J. DE BAYE, *Études archéologiques. Époque des invasions barbares; industrie anglo-saxonne*; PAUL LACOMBE, *La Famille dans la société romaine*; S. REINACH, *Description raisonnée du musée de Saint-Germain-en-Laye*, vol. 1; E. CARTAILHAC, *La France pré-historique d'après les sépultures et les monuments*.

November-December.—M. DELOCHE, *Study on some seals and rings of the Merovingian period* (contin.). LXXXIX. Seal-ring of Paulina. This was found at Angers. It is a gold ring, two millimetres thick, with an opening of 15^{mm}. The bezil is inscribed PAVLINA. xc. Seal-ring of Basina. This is a silver ring found, in 1882, at Gamiole, province of Namur. The monogram is deciphered as St(gnum) BASINE. The name Basina is well known in Merovingian chronicles. xci. Another seal-ring with the monogram Basina. This is a bronze ring found also in the province of Namur, but in a warrior's tomb. xcii. Seal-ring of Cona. A gold ring now at Bonn, found doubtless in the Rhine region. The monogram is read S(ignum) CONANE. xciii. Seal-ring of Ailla. Bronze ring at the museum of Namur, inscribed AILL, read AILLA. xciv. Ring inscribed with an equal-armed cross, at the angles of which are four points. xcv. Ring with a monogram, found at a place called the Wood of the Sorcerers, province of Namur. xcvi. Seal-ring with the letter S with cross-bar. xcvi. Seal-ring with the letter A repeated. xcvi. Ring with the initial N repeated. xcix. Ring with the three crucifixion nails. The six rings last mentioned are in the museum at Namur.—J. MÉNANT, *The Cylinder of Urkham in the British Museum* (pl. xxii). This cylinder, formerly in the possession of Dr. John Hine, and published, from the drawing of Rich, by Grotefend and by Ker-Porter, is now in the Koyoundjik

gallery of the British Museum. From the unique character of the royal throne, as well as from its general spirit and technical execution, Ménant considers it a copy and not an archaic original.—A. H. SAYCE, *The cuneiform tablets of Tel-el-Amarna* (translated by S. Reinach). During the winter of 1887-88, were discovered the important series of cuneiform tablets from Tel-el-Amarna in Upper Egypt. These are now in the museums of Bülak, Berlin, and the British Museum. They reveal to us that, in the xv century B. C., there existed active literary relations between Babylonia, Egypt, the small states of Palestine, Syria, Mesopotamia and even eastern Kappadokia. The medium of communication was the cuneiform language of Babylonia. It follows from this, that in all the civilized Orient of this period there existed libraries and schools where the Babylonian language and literature were taught—Babylonian was then the language of diplomacy, as French in modern times. The present paper deals only with the tablets at Bülak, which are specially important for the relationship between Egypt and Palestine. They suggest the question, Why should not the mounds of Palestine be explored in search of similar treasures?—R. MOWAT, *Inscriptions from the territory of the Lingones preserved at Dijon and at Langres*. It is generally admitted that the limits of the diocese of Langres, before its dismemberment for the formation of the diocese of Dijon, corresponded to the territory of the Gallo-Roman Lingones. Seven figured but uninscribed monuments and fifteen inscriptions from this territory (now at the museum at Dijon) are here published (to be contin.).—CHAMONARD and CONSE, *Catalogue of Greek and Italo-Greek painted vases in the collection of M. Bellon*. Preface by MAX. COLLIGNON. This catalogue is the description of a portion of the collection of M. Bellon of Rouen, which was selected by M. Collignon to exemplify the history of the art, and was exhibited at the Exposition of 1889 (to be contin.). Forty vases are here described.—H. LECHAT, *Marble head in the Akropolis Museum at Athens* (pl. xxiii). This is a Pentelic marble female head, found on the Akropolis in 1888. It is the only one of these archaic heads which wears the *polos*, and hence may be called an Aphrodite. In style it may be associated with the heads published on plates xiii and xiv of the *Musées d'Athènes*, and dated from the early years of the v century.—E. MÜNTZ, *Pope Urban V. An Essay on the history of the arts at Avignon in the xiv century* (pl. xxiv). The object of this paper is to make known, by the aid of inedited documents from the Vatican, some of the expenditures in the interest of art, and the names of the artists employed by Pope Urban V. It may serve as a complement to the papers already published on the tomb of Urban V in the *Gazette Archéologique* (1884, pp. 98-104) and in the *Gazette des Beaux-Arts*, (Nov., 1887).—MISCELLANIES. *Monthly Bulletin of the Academy of Inscriptions*.—*Archæological News and Corre-*

pondence.—BIBLIOGRAPHY. Reviews of RAYET, *Études d'archéologie et d'art* (by M. HOLLEAUX); *Œuvres complètes de Mg^r X. Barbier de Montault*. TOME I and II (by E. MÜNTZ); MÜNTZ, *Guide de l'École Nationale de Beaux-Arts*.—SUPPLEMENT. R. CAGNAT, *Review of Epigraphic Publications relating to Roman Antiquity*.
ALLAN MARQUAND.

REVUE DES ÉTUDES GRECQUES. 1889. July-Sept.—S. REINACH, *Apollon Opaon at Kypros*. On a column found by Cesnola at Palaio-Paphos is a dedication ΟΠΑΟΝΙ ΜΕΛΑΝΘΙΩ. A similar dedication is engraved on a stèle published by Colonna-Ceccaldi. Mr. Hogarth, in excavating in 1888 at Amargetti=Paphos, found ten vases of ex-votos with a similar dedication, Ὀπάωνι Μελαυθίω; while on a statuette he read Ἀπόλωνι Μελαυθίω. A note regarding the latter find is given in the JOURNAL (IV, p. 349), and a summary of this paper by Reinach, as read before the Académie des Inscriptions, will be found in the JOURNAL (V, pp. 373-4). According to the inscriptions, Opaon=Apollon, as an epithet turned into a proper name. Opaon as the shepherd reminds of Aristæus, the Arcadian Apollon (Nomios), who is sometimes called the son of Apollon. The surname Ὀπάων as applied to Apollon is also of Arcadian origin, and the well-known relations between Kypros and Arkadia authorize this transmission. Melanthios may be the name of the eponymous hero of the Attic deme of Μελαιστράι or of the ancient Arcadian city of that name, transferred by emigration to Kypros and then identified, as a second name, with Apollon=Opaon.—G. SCHLUMBERGER, *Inedited Byzantine Seals*. Without waiting for the issue of the supplement to his *Sigillographie byzantine* published in 1884, the writer here describes and illustrates a number of important inedited Byzantine leaden seals, impressions of which have been sent him, among many others, since that year. Among them are the seals of "Gregorios Kamateros, Imperial praetor of the Peloponnesos and Hellas" (1073-1118); of "Theognios, turkmarch of Hellas" (VIII-IX cent.); of "Dargde-Kavos, archon of Hellas" (VIII-IX cent.); of "Paulos, abbot of Daphne" (X cent.); of "Theodoros, bishop of Aigina" (IX cent.); of "Johannes, metropolitan of Thebes" (X-XI cent.), a magnificent work; of "Nikolaos, hypatos and chartulary of Kephallenia" (VIII-IX cent.), very rare; of "Arkadios, protospatharios and strategos of the Bosphoros" (X-XI cent.), the most interesting of all, for it is the first-known that bears the name of the Bosphoros; of "Niketas, epoptes, imperial notary of the West and slave of our mighty and holy emperor" (period of the Angeli), an extremely rare seal as there are but two others of epoptes or imperial inspectors of the provincial administration; of "Polydoros, regionary" (rare, of VI-VII cent.); of "Georgios Saponopoulos," a superb seal of the X or

XI century.—ARCHÆOLOGIC BULLETIN.—EPIGRAPHIC BULLETIN.—BIBLIOGRAPHY.

Oct.—Dec.—*Inedited letter of Böckh to Raoul-Rochette.* This letter treats of wall-painting among the ancients, in view of the famous controversy on the subject between Letronne and Raoul-Rochette. R.-Rochette considered that the early works were all portable paintings on wood, and that wall-paintings with historic subjects arose only with the decadence: Letronne everywhere saw paintings executed directly on the walls. On the main issue, Böckh agrees with R.-Rochette.—CHRONIQUE, etc.

1890. Jan.—March.—S. REINACH, *Inedited inscriptions copied in Asia Minor and Syria by Capt. Callier (1830–34).* The long sojourn of Capt. Callier in the East, in connection with M. Michaud, resulted in his bringing back an immense mass of archæologic material, which he, however, never found time to publish. After his death, in 1889, his widow turned over his papers to M. Reinach, who here gives the result of an examination of his copies of inscriptions. Most of those which he took have been since published by other travellers, but a number are inedited, the originals probably having since perished or been used as building-material. These are (1) from Alia, of 192 A. D., a stelé in which the town places itself under the protection of the god Mên (= Askenios); a metric inscription; (2) from Flaviopolis=Temenothyrai, an inscription on the base of a statue raised by the city of Amorion in Phrygia to an archon of Temenothyrai, in connection with which M. Reinach discusses the question of the site of the latter city, and whether it is at Oushak, where this inscription was found; and he concludes in favor of this identification. The number of inscriptions given by Reinach is seventy-five. A. L. F., Jr.

RIVISTA ITALIANA DI NUMISMATICA. 1890. No. 1.—F. GNECCHI, *Notes on Roman Numismatics.* A unique Antoninianus of Zenobia is here published. Then follows a chapter on countersigns impressed by a punch on coins of the Republic and early Empire. There are two classes: *countermarks*, consisting of letters that stand for certain words, and *countersigns*, consisting of simple conventional signs. The former class—comparatively easy to understand and more apparent, while they are, at the same time, not numerous—have been carefully studied. The *countersigns*, however, have been neglected; they are much less visible, far more numerous, and very difficult to explain. They appear almost entirely on gold and silver coins. Bahrfeldt, Engel, Taillebois, and Milani have made slight contributions to the subject within narrow limits, but it has never been treated on a broad basis. In the tables annexed to this article, some 600 countersigns or groups of countersigns are given, slightly larger than their natural size. The greater part (481) are found on coins of the

writer's own collection, the rest (117), on coins in the Brera collection at Milano. As a necessary complement, and for the identification of the signs, there is a list indicating the identity and family of the coin, the name of the coiner, the date, and the position of the sign, whether on the obverse or reverse. The weight and condition, being useless, are not given. The writer believes that the signs were not punched officially by the State, but were the work of private individuals. He rejects Professor Milani's opinion, that they indicated, some a diminution, some an increase, of the normal weight, and were added by bankers. The writer's conclusions are: (1) the silver coins with countersigns are all of good silver, with very few exceptions; (2) the countersigns exist not only on the *aurei* but on all silver coins, *denarii*, *victoriati*, *semivictoriati*, *quinarii*, and *sextertii*, including even the incused coins; (3) they are found, as a rule, on worn coins, and only exceptionally on those fresh from the mint; (4) the great majority are on the obverse; (5) the countersign is usually single, but there are sometimes two, three, four, five, six, and even more, on a single coin; (6) it is very difficult to find two countersigns that are alike; (7) very few represent any object, most of them being as it were cabalistic signs; (8) their date is from about 100 B. C. to about 200 A. D.; (9) there are but very few among gold coins, while the proportion of silver coins punched with them is about 10 per cent. The explanation proposed for the existence and use of countersigns is as follows. When, under Nero, the Roman *denarius* was much reduced in weight, the earlier coins increased in value, but on account of long use and deterioration it became the custom to guarantee them by a private mark involving the responsibility of the marker, a sign which often sufficed to carry them through many transactions, but which later had to be supplemented by a second, a third, or more. This would show that, in the time of Nero, a large part of the coinage in circulation belonged to the old Republican coinage. In other words, the countersigns serve by their greater or less frequency to give a sufficiently exact indication of the quality of the coins in circulation at the time of Nero.—TARQUINIO GENTILI, *The coins of the Roman pontiffs Leo VIII (considered antipope) and John XIII, from 963 to 972 A. D.* The writer enters into a long historical disquisition concerning these two popes, especially in regard to their relationship to the German Emperor Otho, by whose aid they were elected and maintained in office, and to whom they granted extensive civil authority in Rome itself. These historic facts have light thrown upon them by the coins attributed to these two popes, which differ radically from all other early papal coins. On the first the legend is LEONI PAP.—OTTO. The only possible interpretation of these coins in which the Pope's name is in the dative, and the Emperor's in the nominative, is that they were coined by order not of the Pope but of the

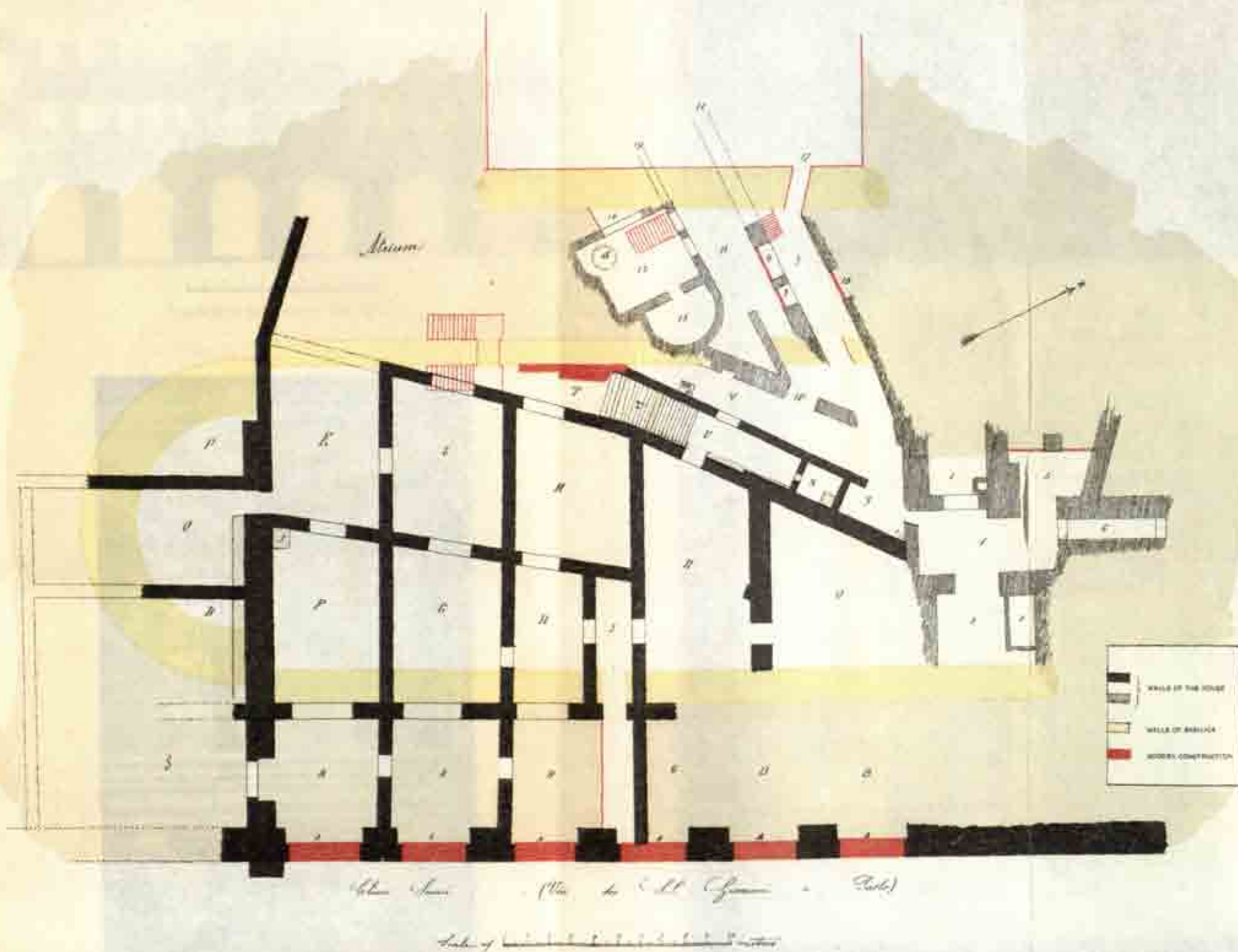
Emperor. This proves the extensive delegation of civil power to the Emperor. Details are given to show in what part of the years 964 and 965 the three different known coins of Leo VIII were coined. One of the coins of John XIII is of a type almost identical with two of Leo VIII, but his name appears in the nominative, as an affirmation of a change in the relations toward greater independence. In two other types of this Pope's coins the inscription is IOHANNES PAPA OTTONI IMPER., a sign that papal authority was strengthened but was desirous of conciliating and securing the support of the Emperor. The cross instead of the word *Roma* on the reverse is interpreted as a sign of the revindication of the Roman Empire by the Othos, it being the traditional emblem of Italian royalty on the coins of the Frankish kings coined in Italy.—S. AMBROSOLI, *An inedited patacchina of Savona of Filippo Maria Visconti*. Four times did Savona fall under the Milanese yoke. The second occasion was between 1421 and 1435 under Filippo Maria Visconti. Only two numismatic records of this period were known; a third is here published.—R. VON SCHNEIDER, *An anonymous Mantuan Medallist of the year 1506*. The writer—basing his opinions on an original drawing in the famous collection of the Belle Arti in Venezia, on which are two profile portraits recognized to be those of Emperor Maximilian I and his wife Bianca Maria of Milano, executed probably from portraits by Ambrogio de Predis—discusses a medal and a *testone*, coined both in gold and in silver. It bears the inscription *Maximilianu. Ro. Rex et Blanca M. coniuges*. All that is on the drawing is here reproduced, showing for what purpose it was made. It is known that the *testone* and medal are the work of a Mantuan die-cutter called in 1506 to Halle in the Tyrol, then the seat of the most important mint within the imperial territory. This artist is spoken of in many documents now in the archives of Innsbruck, showing him to have executed a great deal of work. His name has not yet been ascertained, nor have works of his for the Mantuan mint been identified as yet.

A. L. E., JR.

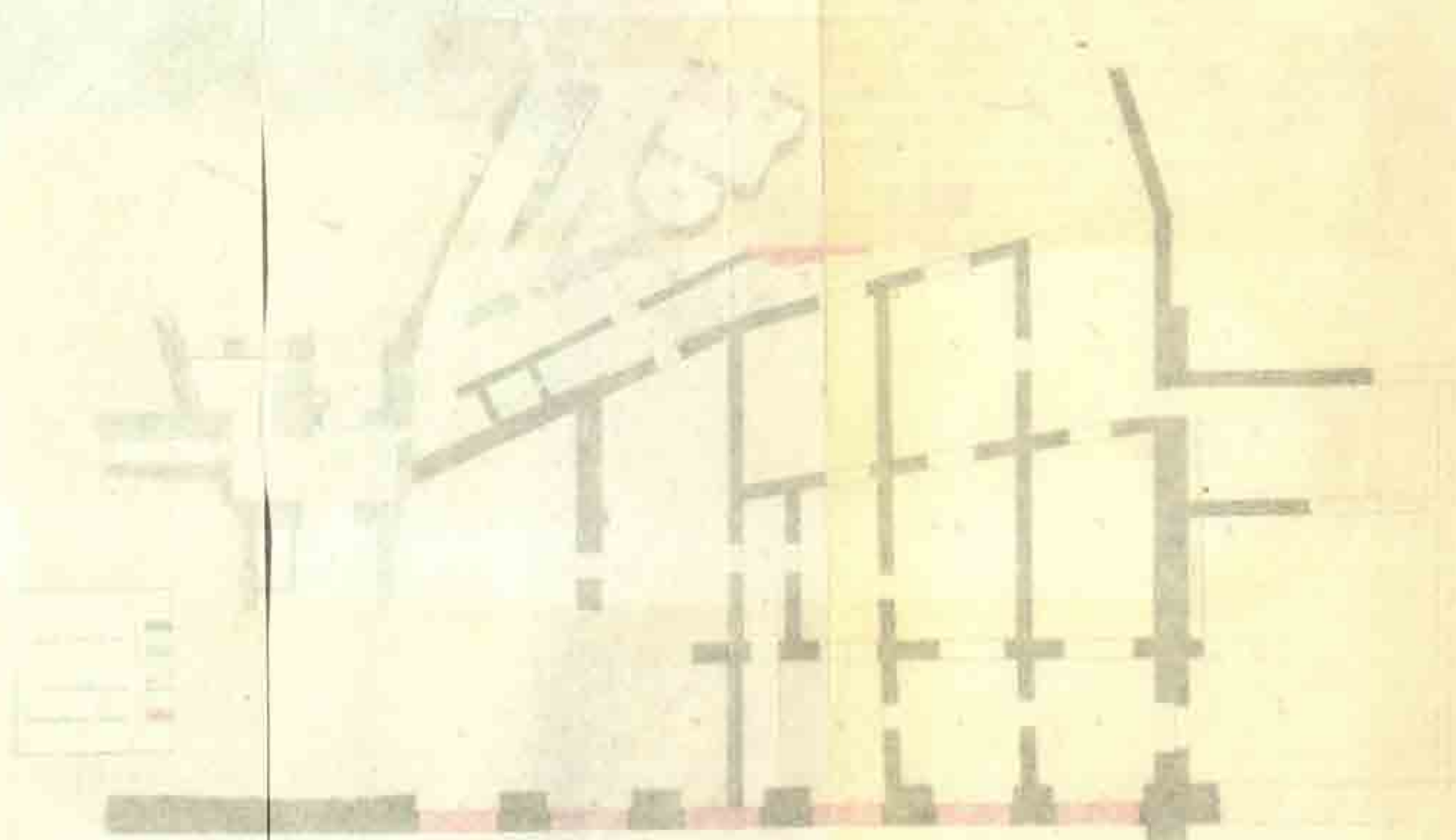
RIVISTA STORICA ITALIANA. 1890. Jan.-March.—E. CALLEGARI, *The inscription of Akraiphiai* (1-40).—M. Holleaux, of the French School at Athens, discovered at Akraiphiai in Boiotia the text of the official address pronounced by Nero at the Isthmian games in the plains of Corinth, by which he gave them nominal independence [this is spoken of in the *JOURNAL*, vols. IV, p. 491, V, p. 241]. The present writer takes this occasion to study the question: Whether Nero had any merit or influence as orator and poet. He inclines to the belief that Seneca was practically the writer not only of Nero's orations after his accession but also of those which he had previously delivered and which Tacitus mentions. Nero

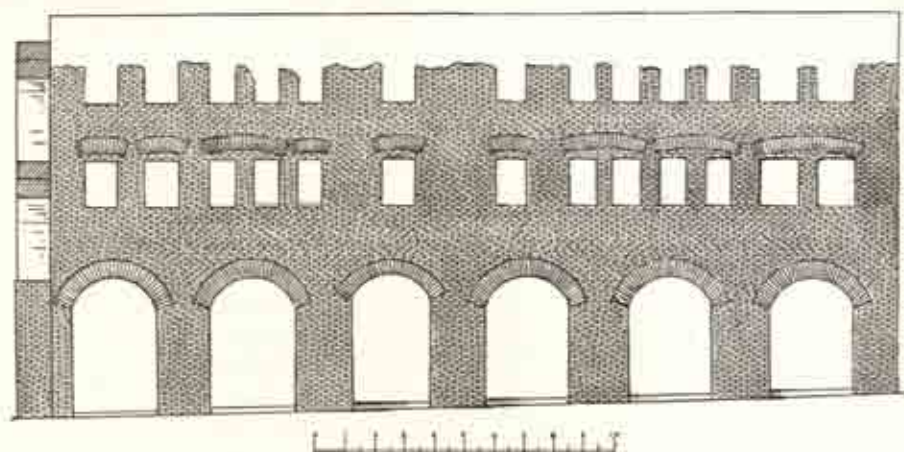
was not a born orator. As a poet, especially as a broad satirist, his apparent popularity and many passages of ancient writers would show him to have possessed considerable power, were it not that this popularity did not last. Two great defects of his style were an affected strangeness and a multiplicity of learned citations, showing less poetic facility than erudition. But a study of Roman literature after Augustus shows that Nero was but an embodiment of the defects of his age. In regard to the address of Nero which forms the pretext for this paper, the writer points out its historic value, and recognizes it to be a genuine composition of the unaided emperor. He here shows the customary ability of the period to express in high-sounding and empty words sentiments which were not felt. The writer takes occasion to attack the moral attitude of Seneca, and to accuse him of insincerity, adulation and falsehood, a pitiful instance of the degradation of the century. The inscription of Akraiphiai adds nothing to our knowledge of Nero as a literary character.

A. L. F., JR.



HOUSE OF THE MARTYRS JOHN AND PAUL ON THE COELIAN.





Facade of the house on the Clivus Scauri.



Roman Arches adjoining the Claudium.



No. 1.—FOUR SECTIONS OF A CYLINDRICAL BABYLONIAN BAS-RELIEF FROM URUK, IN PERSIA.



No. 5.—*Merodach shooting Tinat.*



No. 6.—*Combat of Merodach and Tinat.*



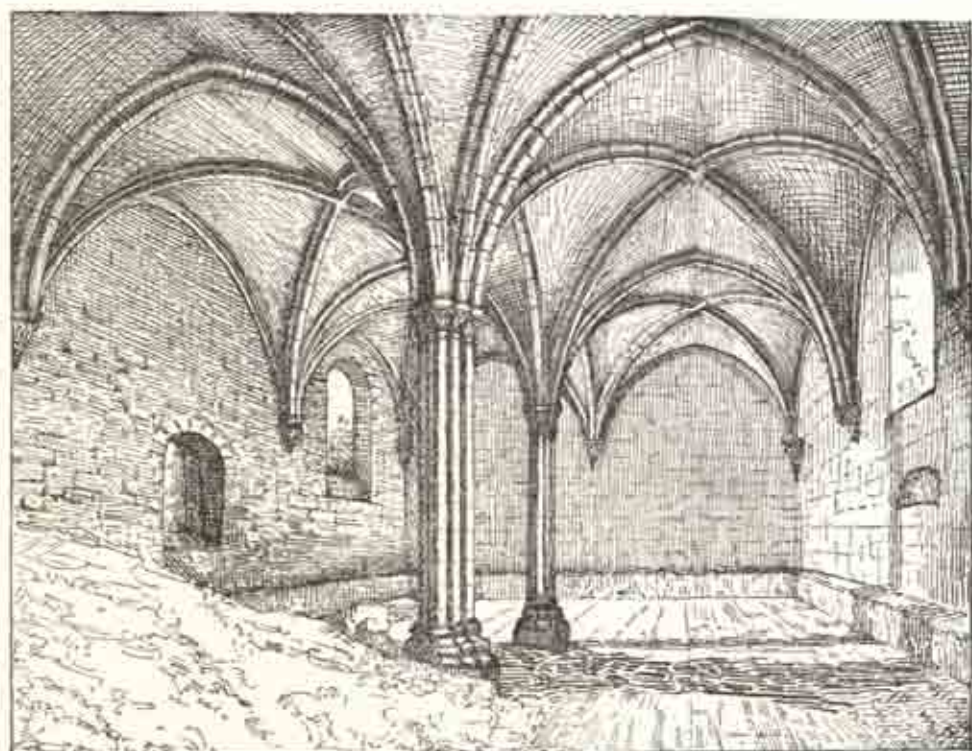
No. 7.—*Merodach and Zarganil.*

No. 8.—SEAL-CYLINDERS REPRESENTING BEL-MERODACH.

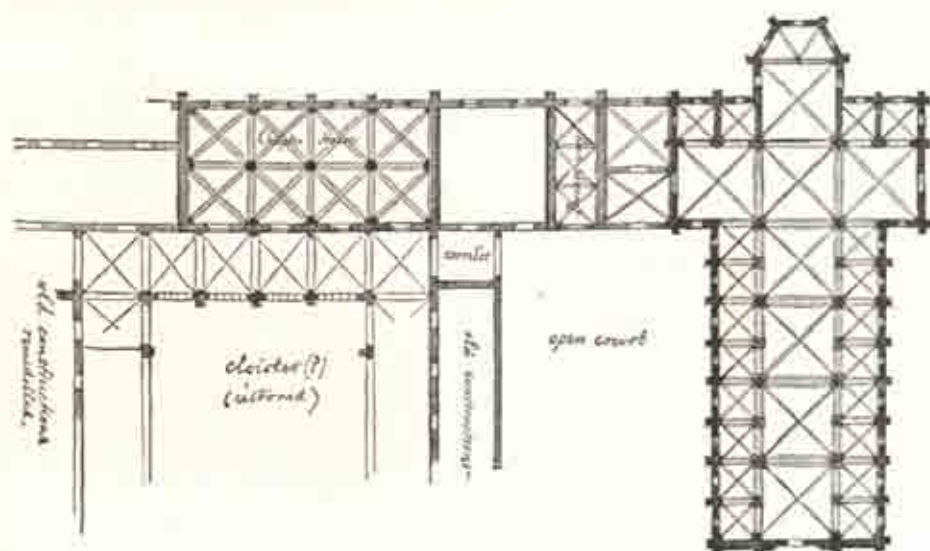


INTERIOR OF THE CHURCH OF THE CISTERCIAN MONASTERY OF SAN MARTINO AL CIMINO, NEAR VITERBO.





Interior of Chapter-House.



Ground-plan of Monastery and Church.



Temple of Ephesus, of Great Britain, at London.





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No. 4.

A VASE OF THE MYKENAI TYPE IN NEW YORK.

[PLATE XXII.]

In the course of a recent visit to America, I was shown with much kindness the Abbott collection of antiquities from Egypt now in the Museum of the Historical Society of New York. Needless to say, the inspection of the Museum was full of interest. But in passing round the cases there was one object that suddenly attracted my attention. It was a painted vase, here reproduced. It stood beside other vases of purely Egyptian fabric, and on turning to the catalogue we saw that it had been found in Lower Egypt. Yet it was clearly different from true Egyptian ware. To me it was from the first an unmistakable example of the pottery which of late years has been found at Mykenai, at Ialysos in Rhodes, at Spata, Menidi, and on many other sites of Greece proper. At the same time, it was far more naturalistic than any vase of the kind that had been hitherto observed and recorded. Even the shape was a little startling, so entirely novel was it. I concluded that it was a very late specimen of the Mykenai ware.

There was not, in fact, anything strange in a vase of this class coming from Egypt, because I had long been familiar with pottery of the ordinary Mykenai type found in that country. The British Museum has a number of specimens. Meantime I remembered a letter from a correspondent in Egypt who had purchased a remarkable vase which had been found at Erment on the Nile, about ten miles above Luxor. On returning to London I found that this vase had arrived at the British Museum and was an absolute counterpart of the one in New York, except in the matter of shape which in this second example was a shape

familiar to the Mykenai pottery. Otherwise it may be safely said that both vases had been painted by the same man, if not even on the same day, so completely identical is the style of painting in both. Add to this that the subject represented is the same in character, the principal decoration being a large figure of a nautilus repeated round the body of the vase in the position of sailing along in the sea with three large feelers (*plektanai*) rising from the shell and turning in a naturally decorative manner. The suckers along the edge of the *plektanai* are very plainly indicated. The bottom of the sea is represented by rocks with sea-weeds growing from them, and, what is curious in the painter's endeavor to give us a view of the bottom of the sea is that, when he had put in his rocks rising from what is naturally the bottom line of the picture, he then turned the vase upside down and started with a new bottom line, having again rocks and weeds rising from it. At first sight these latter appear to be hanging from the sky; but, in fact, it is a contrivance to give us a sort of bird's-eye-view down into the sea. It may here be noticed in passing that the gold cups of Vaphio exhibit in the same way a rocky ground along both the top and bottom of the design, as does also the stone pyxis from Mykenai¹ with the relief of two fine cuttlefish sculptured in low relief.

The sea-weeds and the nautilus are drawn with such apparent realism that I had no thought but that they would be instantly recognized and identified by naturalists. This hope, however, proved delusive. While certain features are admittedly rendered with great force and truthfulness, yet, on the whole, the nautilus on these vases is not nearly an accurate drawing of the nautilus known to modern naturalists. Nor, in fact, does it answer to the descriptions of ancient naturalists except in its general aspect. Details, which are all important to a naturalist, were often in the way of a painter whose design must first of all be decorative. Aristotle² (*De Animal. Hist.*, ix. 37. 12) mentions as a characteristic of the nautilus that its *plectanæ* were connected by a very thin membrane like a spider's web (*ἀραχνιώδες*), which it employed as a sail when there was a breeze. There is no trace of this on the two vases; yet there is to be seen on a very striking, but not yet pub-

¹ *EpheMERIS arch.*, 1888, pl. 7, fig. 1.

² Quoted by ATHENÆIOS, vii. 105; see also AELIAN, ix. 34, and PLINY, *Nat. Hist.*, ix. 88. ARISTOTLE (*De Animal. Hist.*, iv. 1. 16) says that the nautilus was called also πορτοζα, which PLINY (*loc. cit.*) appears to confuse with the *pompilus*, the sacred fish of the Greeks.

lished, vase of the Mykenai type from Kalymna in the British Museum exactly such a membrane connecting the feelers of an octopus—a true octopus with eight *plectanae*, four of which have suckers. It would seem as if the vase-painters of the Mykenai period had observed the natural features of the polypi carefully enough, but had distributed them wilfully amongst different species.

Ever since the pottery of the Mykenai class came into notice the remark has been made that it must have been the production of a people living on the coast of the Mediterranean and devoted to marine pursuits, so regularly are the designs on it drawn from aquatic, if not always strictly marine life. The cuttlefish, the murex, seaweeds and aquatic plants were the favorite subjects, and when by chance the painter essayed to sketch a quadruped the effect was ludicrously inadequate. See, for instance, the quadruped on a large vase found at Kalymna now in the British Museum. The inference was that the makers of this pottery could have had only a very secondary interest in the creatures and growths of the land. But this could hardly apply to the Greeks, who, though they had an extensive seaboard, are not known to have cultivated the coast at the expense of the inland. It seemed as if the pottery could not have been the work of Greeks in the mainland of Greece, while, on the other hand, the presence of the murex as a frequent design seemed to point to the Phœnicians, with whom it was an industry to fish for the murex and to extract a dye from it. This industry they carried on actively on the coast of Greece. They lived on the coast of the Mediterranean. Of all manners of life they preferred that of the sea. Cyprus was one of their principal settlements and Cyprus has yielded a number of vases of the class in question, the chief of which are to be seen in the Metropolitan Museum of New York, including one on the handles of which are incised Cypriote letters. Nevertheless it was to have been expected, on the theory of a Phœnician origin for these vases, that Cyprus would before now have yielded an abundance of them. It is certainly significant that this has not been the case. So also is the general absence of inscriptions, when we consider how fond the Phœnicians were of putting this or that on record in writing.

Apart from the pottery, if that is necessary, the Phœnician theory would account satisfactorily for many of the other antiquities found with the pottery in Greece. It would explain the numerous objects cast in glass-paste in the form of rosettes and occasionally of creatures

such as the Sphinx and the nautilus, the bottles of variegated glass, the carvings in ivory, the inlaid daggers of Mykenai, the skilfully-made weapons of bronze, the engraved gems, and the occasional scarabs with Egyptian hieroglyphs. In short, the opening incident in the pages of Herodotos when a Phœnician ship comes to Argos to barter its wares seems to be illustrated by the finds of Mykenai, Nauplia, *etc.*

But it does not follow, because the Phœnicians had in early ages something like a supremacy of trade on the Mediterranean, that they were the exclusive traders of the time. It would be more natural to suppose that their success had been won over rivals. We read of Minos, the legendary Cretan ruler, with his thalassocracy, and we think chiefly of war, not of commerce—yet the power of Minos would have been of little moment unless to protect commerce. To this day the island of Kreta remains unexplored: but the number of gems of the Mykenai class which have been picked up on it from time to time may indicate what is in store when a systematic exploration takes place. Not that we suppose Kreta to have stood by itself as a rival of the Phœnicians. Kreta would have been joined in trade with Rhodes, Kalymna, Kos, to mention only those sites where antiquities of the kind in question have been conspicuously found. And whatever was produced in those districts would equally have been produced on the neighboring coast of Asia Minor, as we see from the results of excavations at Assarlik in Karia. Close as they were to the seats of the Phœnicians, those districts would indeed have been barbarous had they not learned some of the arts by which the Phœnicians were so obviously enriching themselves. As a matter of fact, the Greek or semi-Greek populations of Asia Minor and of the islands more or less close to Asia Minor were early noted for their skill in the arts. As time went on, it was among them that the higher arts rose first into fame.

It would seem, then, that in searching for the origin of the antiquities of the Mykenai class we ought to keep in view a combination of Phœnician and Græco-Asiatic influences. The Greeks of Asia Minor—those Carians and Ionians, who, in historical times, served as mercenaries in Egypt and ended by placing Psameticos I on the throne of Egypt, about the middle of the VII cent. B. C.—were likely enough to have been acquainted with that country sometime before then. They were as likely as the Phœnicians to have carried up the Nile the vase of the Abbott collection and those others kindred to it of which we have spoken. They would bring something back in exchange,

whether it was in the form of scarabs with hieroglyphs, glass bottles, or whatever else. We may well doubt, however, whether they had ever cared to learn those more complicated arts in which the Phœnicians excelled, such as the production of artistic designs in glass or the inlaying of metals. It is far more probable that, whenever objects of this nature are found along with the Mykenai antiquities in Greece, they are the work of Phœnicians; while as to the pottery, the engraved gems and the designs in gold, these may perhaps fairly be put down to the account of the early Greek contemporaries and rivals of the Phœnicians. As regards the engraved gems, it is not necessary to point out here that several Greek legends are found represented on them, *e. g.*, Herakles wrestling with Nereus, and Prometheus bound. The former of these gems recalls the frieze of Assos, the latter a vase of what is termed the Kyrene style. If the frieze of Assos with its remarkable combination of animals and human forms reminds us of the painted vases of the latter half of the VII cent. B. C., the gem of Herakles could hardly be thought older than the first half of that century. In any case, both gems take us fairly into the tide of Greek legend as illustrated in art, a tide which we see in full flood on the chest of Kypselos in the VII cent. The date may be wrong, but this much is clear, that those gems were the work of Greek engravers. We can understand them as the work of the men who immediately preceded Mnesarechos, the engraver of Samos, better known as the father of the philosopher Pythagoras.

In the present state of the question, it is not so necessary to enquire about the beginning of the art of the Mykenai kind as to determine when it ended and what are the points of contact between it and the Greek pottery of an ascertained date. Some years ago I had occasion to discuss this matter in the *Revue Archéologique* (XLIV (1882) p. 342), laying particular stress on the occurrence of the rosette as a pattern on vases of the Mykenai class, and arguing that the rosette, though comparatively rare on the vases, is very frequent among the ornaments of glass-paste found with the vases, and that any day it might have become common on the vases also. The rosettes which appear on the vases are of two kinds—the one perfectly formed with regular leaves, as it is found on vases from Kameiros and elsewhere, the other composed of a disc with dots round it, exactly such as we find so often on what are called the Protocorinthian vases. From a technical point of view the fabric of the Mykenai vases is very frequently identical with VII-cent.

vases from Kameiros in Rhodes. The slip with which the vase is covered, the method of painting the pattern on the slip, and the colors employed, are the same. The great and striking difference is in the shapes and subjects of design. Or again, if we compare the way in which the bull of Tiryns is painted, with the formal patches of dark color along his back and belly, with the bulls on the terracotta sarcophagi from Kameiros in the British Museum and from Klazomenai in Berlin, we shall find exactly the same procedure.³ Of course there is more skill on the sarcophagi, and no doubt the Tiryns bull is older in art. The difficulty is to determine the amount of the interval.

Mr. Flinders Petrie has obtained, in his recent excavations in the Fayoum, a certain number of vases of the Mykenai class. He has found them under conditions and amid surroundings which he considers justify him in saying that the latest possible date for them is the XII cent. B. C. Some of them he believes belong to a vastly earlier age. But, as I have said, we have first to settle the latest date of this pottery in Greece and its continuity with the Greek pottery of an ascertained date. Then we may work backward.

To return to the New-York vase with its figures of the nautilus and its sea-weeds. On some fragments of fresco-painting found at Mykenai⁴ we observe an ornamental border composed of figures of the nautilus, converted into a mere pattern with no suggestion of realism or truth to nature. The curling tentacles form just such a pattern as the free hand of the decorator desired. And the question arises, whether we have here a convenient pattern generalized from familiar realistic studies of the nautilus on vases or elsewhere. Such a view is, for my part, contrary to the regular process of invention in art. No one could paint the nautilus as it is painted on the New-York vase unless he had been preceded by a time of study, experiment in drawing, and the invention of materials for painting. The nautilus as a mere pattern at Mykenai appears to me to belong to that age of experimenting where the sweeping lines of a brush into color threw out at almost every turn suggestions of natural forms which the eye was quick to see and improve upon. If this view be correct, we must regard the New-York vase as one of the latest developments of the Mykenai period. As an example of strong, vigorous naturalism, it

³ The Berlin sarcophagus is published in the *Antike Denkmäler*, 1889, p. 44.

⁴ *Ephemeris arch.*, 1887, pl. 12.

may be compared with the gold cups⁵ found last year at Vaphio near Sparta, with their powerful representations of bull-hunting. In one of the scenes, where a huge bull has been caught by a net and is floundering within it, we are reminded that to a people trained to life on the sea-coast the use of a net for hunting would come natural enough, though it strikes us that the net would have to be very strong to withstand the rush of so fierce a bull. For smaller animals the net was of course in regular use in the chase. The net is stretched between two olive-trees to which it is made fast: in the field also are palm-trees. But it does not seem that anything in the nature of a historical date can be obtained from the presence of these trees. So far as they or the bulls are concerned, the gold cups may have been made in Asia Minor or in Greece itself. One of the bulls which has escaped the net tosses, one after the other, the two huntsmen. These huntsmen have long flowing hair, and so far they may have been Greeks. Their costume consists of a girdle round the waist and pointed boots. Altogether they give me more the impression of a Celtic than of an Oriental race. In fact, the whole scene—as presented on the two cups—becomes suggestive of a Celtic people when we apply to it the famous Greek legend of cattle-driving, that of Herakles and the cattle of Geryon. M. Tsountas⁶ very finely compares the two passages in the *Iliad* (XIII. 570, *ad.* XV. 403) where the binding and leading of a reluctant bull are described, and this shows how apt an illustration the gold cups furnish of Homer. It is true that the same scenes had been passing before the eyes of artists and poets long before Homer, and continued so to pass long after his day. But, as regards Greece proper, we may perhaps confidently say, that it was only in or about the time of Homer that these scenes came directly under the observation of artists and were reproduced by them as actual transcripts from nature. Among the Celtic peoples the case would be quite different. The scenes of bull-hunting would be much later in coming within their artistic horizon. But, be this as it may, the point I desire to call attention to in this matter of bull-hunting is the comparison that is presented between the very simple binding of the bull by one hind leg on the gold cup and the complicated binding of the Marathonion bull by Theseus, as seen on the painted Greek vases, *e. g.*, the fragmentary kylix published in the *Journal of Hellenic*

⁵ *Ephemeris arch.*, 1889, pl. 9.

⁶ *Ephemeris arch.*, 1889, p. 162.

Studies (x, pl. 2), which should be compared with a red-figured kylix in the British Museum. The Museum kylix has been well preserved, and shows very clearly that Theseus has taken the precaution of binding the bull, not only by its four feet, but also by the scrotum. On the fragmentary vase just mentioned, we have an earlier stage of the incident. The bull is still unbound. It appears to have knocked Theseus over on his back, or, what is more likely, Theseus has adroitly slipped to the ground, turned round on his back and seized the scrotum of the bull, having a cord ready in his other hand. This, of course, is not the explanation given in the *Journal of Hellenic Studies* (x, p. 238).

It will thus be seen that the New-York vase leads on into a wide field of enquiry, and, if I have only been able to pursue it to a limited degree, yet there is consolation in the fact that hardly anywhere, outside of Greece, can this branch of archaeology be better studied than in the Metropolitan Museum of New York, with its incomparable series of works of this class discovered in Cyprus by General Cesnola.

A. S. MURRAY.

British Museum.

PAPERS OF THE AMERICAN SCHOOL OF CLASSICAL
STUDIES AT ATHENS.
DISCOVERIES AT PLATAIA IN 1890.

[PLATE XXIII.]

I. GENERAL REPORT ON THE EXCAVATIONS.

The Excavations at Plataia which were carried on during the Spring of 1890 under my direction were the continuation of our work on the same site in the preceding year. The funds for these excavations during the two seasons were procured for me by personal friends in America, namely, Dr. Lamborn and Mr. Wealey Harper. The students of the School who took part in the work were Messrs. W. I. Hunt and H. S. Washington of Yale, J. P. Shelley of Findlay College, Ohio, H. D. Hale of Harvard, C. M. Washington of Yale, and J. F. Gray of Harvard.

As stated in my Report last year, the immediate aim of the expedition for this year was not so much actual excavation as topographical work. I desired, in the first place, to make a careful and final survey of the walls enclosing the ancient city of Plataia, and also to study the site of the battle-field of Plataia. The survey of the walls was carried on chiefly under the direction of Mr. H. S. Washington, the maps being drawn by Mr. H. D. Hale. Mr. Hale's map together with Mr. Washington's Report of the work will follow this introduction.¹ A paper on the topography of the battle-field of Plataia

¹ On the whole, we have found our own investigations as regards the site of ancient Plataia and the relations of the various walls to one another to agree most with VIECHER's views (*Erinnerungen und Eindrücke aus Griechenland*, pp. 219, 543). There is also some probability in favor of the hypothesis, recently expressed by FABRICIUS (*Theben, etc., Akademisches Antrittsprogramm*, Freiburg i. B., 1890, p. 17), that the stone walls as now standing were surmounted by fortifications of unburnt brick. That the whole wall (stone and brick) was covered with a uniform stucco is possible, but, I think, not probable; as I do not remember to have seen on the stones themselves traces of stucco, which would in all likelihood have survived. I may also add that one of the best maps of the Plataian district is that made by Spencer Stanhope (*Topography illustr. of the Battle of Plataea*, by JOHN SPENCER STANHOPE, London, 1817). The copy of this map in the library of the museum of archaeology at Cambridge (which contains the whole of Col. Leake's library) is of especial interest, as it contains additions and corrections in pencil by Col. Leake himself.

has been written by Mr. W. I. Hunt, who, with Mr. Hale, studied the question on the spot. Mr. Hunt's paper and the results of the survey of the site, illustrated by a map drawn by Mr. Hale, will also be embodied in this Report. Professor Theodor Mommsen of Berlin, who has for years devoted himself to the study of the numerous fragments of Diocletian's Edict, and is now producing a revised edition of the whole material, was naturally the fittest person to publish the new fragment which we discovered this year in our excavations. He has consented to edit it for us, and this publication also will be included in this Report. Finally, my colleague for the coming year in the School at Athens, Professor Richardson, will, I hope, publish an interesting votive inscription to some female deity discovered by us on the same site.

It was my intention to begin work at Plataia early in February; but, as the weather was particularly unfavorable during the whole season, we had to defer our departure from day to day. I finally yielded to the enthusiastic eagerness of Mr. Washington, who left Athens on February 14, and on the 19th began digging with 22 men at the church where last year the Preamble of Diocletian's Edict was found. He was soon joined by Mr. Hunt and Mr. Shelley, and subsequently by the other students. During this time the party had to contend with great difficulties, the most trying of which was the severe weather, with snow and cold winds, in houses that were not even provided with glass windows; and I cannot sufficiently commend the self-sacrificing perseverance of all concerned. Owing to stress of weather, work had to be suspended for some days. In the first week of March, I joined the party. When not engaged in the excavations, the walls, over $2\frac{1}{2}$ miles in circumference, were carefully measured and surveyed. Mr. Hale also drew the ground-plans of six Byzantine and Frankish churches at which we dug.

Our corps of workmen was increased to a number averaging 40 men, and with these we dug at a promising site at the southeast wall of a Byzantine church and monastery, which I thought might mark an important entrance to the ancient city. Here Messrs. Hunt and Shelley came upon an interesting aqueduct or drain covered with large stones, light yellow in color, at a depth of 1.20 metre below the surface. Mr. Washington describes the stone as somewhat like *poros*, very soft when first found, but hardening on exposure. It is apparently a limestone containing gypsum and a small quantity of

tale. These large stones covered terracotta drain-tiles, which are laid in trenches cut through very solid soil. The tiles are made of well-baked red clay, are 0.20 m. deep and 0.15 wide (interior measurements), and about 0.03 thick. They were joined together end to end, not overlapping, by a grey cement very neatly applied. The tiles have apparently a very gentle slope down toward the city, which is a confirmation of the supposition that they served as an aqueduct. Mr. Hunt and I explored the neighborhood for the possible source; and there is some probability that he discovered this, outside and to the south of the city-wall, at some considerable distance from the point at which we found the tiles. The aqueduct runs under the city-wall and under the church, a block of the aqueduct being cut away obliquely. It is probable that the wall was the earliest, the aqueduct the next in date, and the large church the latest.

Several inscriptions had already been found; but at this church we discovered, in a grave below the east wall, two large inscriptions used as covering stones. One turned out to be another slab of the Diocletian Edict, giving, in Greek, the prices of textiles. This contains a large portion of the 17th Chapter in Waddington's edition of the known texts, with some interesting variations, as well as a column and a half of material hitherto unpublished and unknown, constituting the beginning of the chapter. It appears to me not unlikely that the Preamble found last year and this text, though they were found within the city about a mile apart, are portions of the same document. The marble slabs are of the same material, and must originally have been of the same dimensions; and it appears probable that the Preamble remained in the original Latin, while the text, which was of practical importance to the people at large, was here posted in the Greek translation. The other Greek inscription records a dedication to some goddess on the part of women, with a list of interesting female names. From the frequent mention of a torch (*δαίς*), it seems not unlikely that the goddess was either Demeter or Artemis Eukleia, both which goddesses had temples at Plataia.

We continued to dig at various sites outside the city-walls, hoping to find some clue for discovering either the Temple of Demeter (and in this we followed Mr. Hunt's suggestion) or the Temple of Hera. We did not succeed in fixing these sites; though several objects of interest were discovered. Thus, for instance, on Mr. Hunt's site, a fragment of an inscription undoubtedly referring to some hippic con-

test, may possibly refer to the games called Eleutheria which were celebrated outside the city-walls (cf. Pausanias, ix. 2. 4). It may be desirable to make one more attempt, next season, upon this site, and to search again for the Temple of Hera inside the city-walls, at the church where last year we found the Edict of Diocletian. It is true that we came upon the native rock in digging in this church, but it may be desirable to continue trenches around the church, cutting them to the rock throughout. When this has been done, these explorative excavations may be considered as completed.

What seems to stand in the way of important discoveries of temples and sculptures at Plataia, is the fact of its evident importance in Byzantine and Frankish times. Our exploration has certainly taught an historical fact which seems to have been previously overlooked: for it is generally supposed that, after the classical period, Plataia sank into insignificance and oblivion. Our excavations, together with the existence of the numerous Byzantine and Frankish churches (there are over twelve scattered about the site), certainly prove that, in Byzantine and Frankish times, this must have been a densely-populated and important city. The people were probably attracted thither by the situation, which commands the Boiotian Plain; possibly, too, its walls may have remained standing. It appears to me also that Plataia must have been a centre of considerable importance in Roman times.

CHARLES WALDSTEIN.

American School of Classical Studies, Athens.

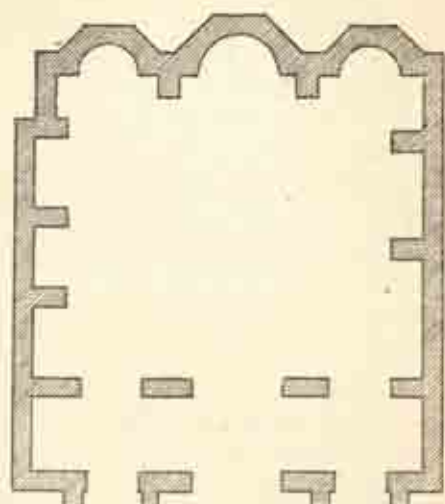
April, 1890.

II. DETAILED REPORT ON THE EXCAVATIONS.

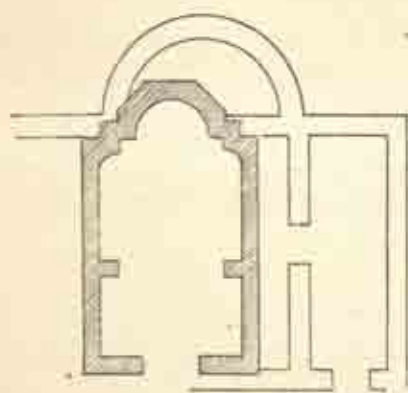
Work was begun Feb. 19 with 22 men at *Church No. I* (MAP, PL. XXIII), where two days were spent in partially clearing out the church and sinking a trench, running north, about 40 m. long. The paving-stones of the church (about 70 × 60 cm., and 20 cm. thick), of good white marble, were examined on the under side, but no sculptured work was found on them—they probably formed the pavement of a temple. Two late walls built with small stones laid in mortar were crossed by the trench, and at its northern end a low arch of brick-work, probably Byzantine, was laid bare. The trench was sunk to a depth (in places) of 2.70 m., but, with the exception of a fragment of



Church No. III.



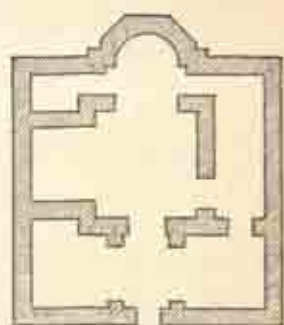
Church No. I.



Churches Nos. V and VI.



Church No. IV.



Church No. II.

FIGURE 18.—Ground-Plans of *Byzantine Churches at Plataia* (Scale, 0.1=1 metre).

a small sepulchral stele of late Roman work, representing a man and his wife, nothing was found.

On Feb. 21, work was begun at *Church No. V*. The church was cleared out, and a trench was sunk to the south of it running east and west. The upper cross-wall was traversed (at a depth of 50 cm.) at a distance of 37 cm. from the point *W'*.

Work was not resumed till Feb. 25, a feast-day, Sunday, and snow intervening. We then went on upon the same site with 25 men, and a larger apse, surrounding the smaller one, was uncovered.¹ Next day, with 30 men, the church-walls were partly torn down and numerous graves opened. The covering-stones of the "aqueduct" were laid bare (1.20 m. below the surface) for the space of 8 m. The aqueduct passes



FIG. 19.
Section of Aqueduct.

under the city-wall and under the southeast corner of the larger church, running w. s. w. A section of it is here given (*Figure 19*). The top stones, roughly cut (of unequal size, but averaging about 60-70 cm. each way, and 40 cm. thick), are of a light yellow stone, somewhat like the *poros*: very soft when first found, but hardening on exposure. It is apparently a limestone, containing gypsum and a little talc, and comes doubtless from a ridge on which stands a small chapel, about two kilometers to the east of the city, toward the north from the Vergoutiani spring, near Argiopoulos. These covering-stones are not closely fitted, in places the holes left at the joints being filled with stones. Several have their edges bevelled, and apparently they were brought from some building.

At the place where the aqueduct passed under the upper cross-wall, the cavity left was partially protected against earth falling in by a rough block of the same stone tilted against the wall; while at the west end, where it passes under the corner of the church, the block was cut away obliquely to make room for the church-wall. This apparently proves that the wall was the earliest, the aqueduct next in date, and the larger church the latest. The trench was followed up subsequently, but to the west of the church only three of the covering-stones were found,

¹ There were two churches at the point where the aqueduct was found, the smaller one built on the site of the larger one. The builders of the smaller church knew of the larger, for the chord subtending the apse was the same in both churches (see *Figure 18*, *Churches Nos. V and VI*).

which apparently had fallen in, as they were lying irregularly. The aqueduct could be traced, however, by the terracotta drain-tiles at the bottom, and by its sides in the hard soil. It had no made walls, being cut through a very solid soil, composed of small irregular stones cemented by a clay-like earth, apparently virgin soil. The drain-tiles at the bottom are of well-baked red clay, like three sides of a rectangle in section (L), the pieces being 60 cm. long, 20 deep and 15 wide (interior measurements), and about 3 cm. thick. These tiles were joined together, end to end (not overlapping), by a gray cement, very neatly applied. The aqueduct was filled with earth to a depth of something like 80 cm., and when this was cleared out was found to have a very gentle slope down toward the west, *i. e.*, into the town.

The next day (Feb. 27), with 30 men, work was proceeded with at the same place, and bed-rock was found at a depth of 3 m., in the larger apse. Several graves were opened, and in them were found quite a number of rough Byzantine lamps and small jars and vases. No further work was done until March 6 (owing to bad weather, feast-days and strikes), on which date 21 men came from Kriekouki and two trenches were sunk, at right angles, inside the ruined church above the Vergoutiani spring, and an inscription was found. Work was also done at *Church No. V*. Next day we worked at a spot north by west from Vergoutiani, where lie a number of large cut blocks (about $1.20 \times 1.00 \times 0.30$ m.) of a coarse marble breccia. Three or four trenches were cut to virgin soil, but with no result. In the afternoon, two trenches were sunk at the ruins of a small church of St. Demetrios to the east of Plataia and northwest of Vergoutiani. The only thing found was part of a small and late smooth column (24 cm. high, 15 wide, and 8 thick) with an inscription. The same day a tombstone was found at *Church No. V*. Two days were spent in sinking two trenches 50 m. long to the south of *Church No. VIII*, running east and west. They were carried (one 1.20 m. and the other 1 m.) to virgin soil, but with no result except the exposing of three or four Byzantine walls of small stones and mortar. Lying on the surface, near the middle of the northern one, was found a block of cut stone ($90 \times 50 \times 30$ cm.) with the characters ΔΓ roughly cut on its upper surface near the middle. The characters are about 10 cm. high. To the south of this trench was uncovered part of a rough platform, a few centimetres below the surface, probably of Byzantine origin. A trench running north and south was dug to the east of

Church No. VIII, and uncovered a corner of the wall of some building, made of large roughly-cut stones, one of which measured 1.20 m. long, 70 cm. deep, and 40 cm. thick. They were only one course deep, however, and, after a few blocks in each side, became merged in a late wall of smaller stones. Some additional work was done in clearing out *Church No. I*, where a well was discovered, the brim being beneath the floor-level (about 6 m. deep and 1 wide), and also in sinking two small trenches at a spot which may have been the theatre. A flat piece of white marble (23 cm. high, 15 wide, and 5 thick) was found here with an inscription. Bad weather coming on, the expedition returned finally to Athens on March 13.

HENRY S. WASHINGTON.

Madrid, Spain :

April 22, 1896.

III. DESCRIPTION OF THE SITE AND WALLS OF PLATAIA.

The ancient city stood on a fan-shaped ridge or plateau, about 1.4 km. long, from north to south, and 1 km. in its greatest width, stretching down from the north slope of Mt. Kithairon toward the plain of the Oëroë. This plateau has its highest point at the southern end, where a shallow ravine, 50 m. wide at its narrowest point, separates it from the lower rocks of the mountain. From this point the plateau slopes down rather sharply at first, but toward the upper cross-wall very gently, the ground becoming almost level inside the lower cross-wall and rising again near its northern edge. In the northeast corner it is split by two small ravines, formed by a couple of little brooks running north. The question whether these existed in ancient times, will be considered below. The soil for the most part inside the walls is cultivated and fairly deep, at *Church No. V* bed-rock being reached at a depth of 3 m., and at *Church No. I* at about the same depth. In many places, however, especially to the west and south, the rock crops out, the soil being very thin. This is especially the case to the south of the north cross-wall, between it and the outer wall as far as *Church No. VII*, and to the north of it, about parallel with its general direction as far as the point *M* of the outer wall. In the northern, or lower, part no rock crops out except along the western wall, as far as the point *T*, and near the so-called votive cuttings. The rock is a coarse gray marble, much corroded into deep holes and

channels where exposed to the weather. All the walls are built of this rock, which forms the ridge of Kitliron to the south, and could be quarried either on the mountain slopes or on the plateau itself. The soil is a rather clayey lime earth, very loose when dry, but exceedingly clinging and sticky when wet—the mud making the plain of the Oëroë and Asopos almost, if not quite, impassable in winter.

The sides of the plateau are not precipitous and rocky, except at a few points. As a rule, they slope gently down to the plain below. The slope has, of course, been decreased during our era by the washing down of earth from the plateau above. It is probable that the sides were never high or precipitous enough to make good defenses *per se*, and that walls must always have been needed to make the plateau a tenable position.

The remaining walls appear to be assignable to five periods. The earliest is characterized by a polygonal style of masonry, though not of the earliest type. The blocks are of fairly uniform size, the form seldom hexagonal, quite often pentagonal, step-cutting common on the upper edge to fit the superincumbent stone, with joints very neatly made. This style is similar to the oldest part of the walls of Lepreon, in Arkadia. The portions of wall exhibiting this style are the worst preserved of all, the stones being much corroded and weatherworn.

The style of the second period—that most largely represented—is intermediate between the first and third. The walls of this period are better built than those of the former, with scarcely any polygonal blocks, but are not so well made as those of the latter period, to which, however, they bear a closer resemblance and for which they probably served as a model.

The third period or style comprises work which is much the best built as well as the best preserved. It is seen in the upper cross-wall, which is entirely of this period, and in the northeast corner. The blocks are larger than those of the first two periods, about 1 m. high, from 1 to 3 m. long, and about 60 cm. thick. They are four-sided, laid in horizontal courses, with the edges neatly and accurately fitted. The vertical joints are very commonly, in fact generally, not perpendicular, but slanting or oblique—never more than 20° off from the perpendicular, however. The adjoining block in almost every case fits closely, with the same slope, except in one or two instances where the slopes are opposite and a well-fitted wedge-shaped block is inserted. The separate courses do not run along continuously at the same level,

but, after varying distances (generally from 5 to 10 blocks) the upper course is lowered (or raised) by the upper side of the block below being cut into a step shape, the difference between the level of the two steps being only a few centimetres, never over five. The outer surface of the blocks, rather rounded or bulging, is cut vertically into wide and rather deep furrows or grooves. The whole is a very good piece of work, the blocks of good size, the joints accurate, and the workmanship everywhere careful.

The fourth period is represented only by the lower cross-wall. It can hardly be said to represent a distinct style, the wall being built of blocks from earlier walls (of the second and third periods), of building-blocks and of other architectural fragments, all of the common, coarse gray marble, no white marble being observed in this wall or in any other. The blocks are not used with much system or care, sometimes the furrowed side being out and as often not. The joints are not close, the blocks not having been recut after their removal from their original positions, and little pains having been taken in fitting them. Mortar and tiles were used at one time to fill up the crevices, as can still be seen in the third tower from the west; but whether or not this was subsequent to the building of the wall cannot be made out.

The last period, including the worst-built masonry of all, is represented by a few fragments and stretches of Roman, or more probably Byzantine, wall, built of rubble and tiles laid in mortar. It is seen only at a few scattered points on the north and west sides.

The walls of the first four periods are very uniformly 3.30 m. in thickness, very little variation from this figure having been noted anywhere. The outer facing is the better of the two, built of larger stones and better finished, but the difference is not great. In all the walls the space between the outer and inner faces was filled with smaller rough stones and earth. How the walls were finished on top, whether battlemented or not, cannot now be determined, nor can any calculation be made, from the *débris*, of the probable height, the fallen stones having been scattered all over and below the plateau, and having disappeared in various ways. In many places, notably at the northwest from *Q* to *S* and at the southwest from *C* to *H*, the wall could be traced only by the smoothing of the natural rock as a bed on which to lay the wall-stones. The rock was rather carefully cut away so as to present a level surface in many places, and several of the step-cuttings were observed in the native rock. At two points, *C*

and between *S* and *T*, the natural rock has been cut away so as to leave a smooth vertical fall.

In order to take up and describe *seriatim* the various parts of the city-walls, we will begin at the point *A*, the southwest corner, and proceed toward the north. This point is the highest and most southerly of the plateau, and from it may be had a fine view of the whole site and the plain of the Oëroë and Asopos rivers stretching away to the north toward Thebes, which is entirely hidden by a low range of hills separating the valleys of the two rivers. Behind us, and to the right and left, runs the ridge of Mt. Kithairon; to the northwest can be seen Mts. Helikon and Parnassos, and to the northeast the mountains of Eubœia. A ravine, about 50 m. wide and about 5 m. deep, separates the plateau from the lowest point of the slope of Kithairon. This ravine was much deeper in former times, a great deal of earth having been washed down from the mountain, especially since the destruction to a great extent of the forest growth. It is wide and deep enough, however, to prevent any earth from being washed down from the mountain onto the plateau, and we may safely say that this part of the plateau has been steadily losing earth since it became uninhabited, and consequently for centuries diminishing in height.

There is little left of the wall above ground (merely one course of blocks, inside and out), but enough by which to determine the period, presumably the earliest. A tower, square in plan, 5.50 m. on each side, stood at the angle, and from this point the wall runs down the slope, toward the north, very well defined till it turns to the west near *Church No. VII*, and thence runs irregularly in a general northwesterly direction till it meets the upper cross-wall. All along this stretch, a single course above ground in a few places constitutes the best-preserved remains, the whole being of the first period. The wall has been traced, for the most part, by the rock-surfaces smoothed for the reception of the masonry. Along a great part of this stretch, notably front *C* to *G*, the wall runs along the edge of a rough and jagged rocky cliff, nearly vertical, but now only a few metres high. Below the point *D*, on the outside, there is a rectangular sarcophagus-like cavity cut in the rock.¹ The point of junction of this outer and older wall with the upper cross-wall cannot be clearly made out, but is probably not far from *H*.

¹ The two branches of the road from Kokla to Kriekonki cut this section of the wall, as shown on the MAP (PLATE XXIII).

We now turn toward the east and follow the upper cross-wall. This is by far the best built of all the walls; it is of the third period, and is in places in a very good state of preservation. It runs for 407 m. toward the southeast in a line almost straight, at one point making a bend of less than 2° and at another of 10° , and there turns to the northeast and runs toward *Church No. V*. The wall is everywhere 3.30 m. wide, both faces carefully finished (the outer one, that toward the south, the better) and the space between filled with rubble of earth and stones. The present height of the ruins varies greatly; at places they barely appear above ground, while at their highest point, the third tower from the west end, the structure is 3.80 m. above ground. Along the outer, *i. e.*, the southern, side of the wall there are remains of eight towers of rectangular plan, measuring 6.70 m. in length (*i. e.*, along the wall) and 5 m. in breadth. The variations are only a few centimetres either way from these averages. The towers are distant from one another 42.50 m., and form an integral part of the wall, not added to the outer face but built at the same time and continuously with it. The best-preserved example is the tower above mentioned, and it offers a few points of interest. The main courses rest on a foundation-wall, projecting 10 cm. beyond them, the blocks of which measure only 40 cm. high instead of 1 m., as in the courses above. This foundation is carefully worked with vertical or very slightly oblique joints, and furrowed facing. In this tower at present three courses of the foundation are above ground, while a similar foundation runs beneath the wall proper, though not visible at present, except at one or two points, owing to the accumulation of earth. The corners of the towers present a striking peculiarity. The rough, bulging sides have been cut in from both sides, so as to leave a sharp right-angled ridge along the vertical edge, finished smooth and clean. This right-angled ridge, which measures 10 cm. on each side, is carried along the whole angle of the tower and is continued in the foundation. It occurs in every tower on all the walls of the first three periods, its use in this upper cross-wall being probably copied from the older walls. The towers, as far as can be judged, were solid, filled up within, like the walls. Another peculiarity of the upper cross-wall (also occurring once in the extreme south wall) is that there are several "platforms," as they have been called, built on the inside of the wall. These are thickenings of the wall, about 10 m. long and 1 m. thick, and were probably buttresses to strengthen the main wall, though too

little is left of them to determine this definitely. At one place in the upper cross-wall two of these platforms occur, one on each side of a tower, while at another place one is found between two towers.

Returning to *H*, we continue toward the north along the western outer wall. The stretch *HI*, distinctly traceable, but not projecting much above ground, is of the second period; it is similar to the wall of the third period, that of the upper cross-wall, but is not so carefully built. It disappears at *I*, and the wall begins again at *K*, where there are traces of a square tower. A wall running east from this point was traced for some 50 m. The main wall, of the same masonry as *HI*, continues to the point *M*, where it makes a sharp angle, turns to the northwest, and thence to *N* is traceable mostly by rock-cutting. From *H* to near *M*, it runs along the edge of the plateau, the ground sloping down gently toward the plain. At *M* is a tower, and the wall from this point on to *N* overhangs a steep and rocky cliff, from 3 to 8 m. high. Inside the tower to the north of *M*, there run for a few metres the remains of an apparently polygonal wall, probably of the first period, as in the extreme southern part, but perhaps earlier still. Below the wall *MN*, perched on the rocks, are half a dozen sarcophagi, hewn in one piece out of the common, coarse gray marble, and separate from the rock on which they rest. The dimensions of the most northerly one are as follows: length (exterior) 2.40 m., width 1.20, height 1.25, thickness of sides, 0.20. These sarcophagi are surrounded at top and bottom by a simple moulding. The interior is sloping at the bottom. The monolithic cover of the sarcophagus measured lies further down the slope; it has the shape of a long, obtuse wedge. To the south of the sarcophagi lie some graves of less importance, hewn in the rock, in the shape of rectangular pits; all these are empty. Of two of the sarcophagi only halves remain, and all the covers with the one exception have disappeared. At a distance of 98 m. from *N*, there are traces of a path leading down through the wall and between the sarcophagi—very faint however. At *N* this wall disappears, though blocks are still scattered about the slope in large numbers, and many are built into field-walls below.

At *O*, begins the lower cross-wall, almost the latest of all. It is built entirely, as stated above, of blocks taken from other structures. The remains of seven towers, measuring 6.20 m. in length by 5.50 in width, are visible in its southern or outer side, joined to and forming part of the main wall, as in the upper cross-wall. The third tower

from the west end is the best-preserved, its extreme height being 3.85 m. The wall makes a rather sharp turn at *Z'*, and thence runs almost due north, with a few slight angles, for over 150 m., finally being lost amid a tangle of blocks and house-walls, which continue till within 50 m. or so of *V*. The wall runs throughout on almost level ground, and no traces of a gate appear. Below the point *O*, near the road, are 19 m. of the inner facing of a wall, built of large cut blocks, apparently of the second period. No connection could be made out between it and the main western wall, and it is probably all that remains of a wall figured in Stanhope's map, but of which all other traces are now lost. At *P*, there are scanty remains of a wall of the same period, half-way down the rather steep, earth-covered slope, and above this is a right angle, apparently a corner of a tower, built of small stones and mortar, while a little further north there is a large mass of the same material.

From *O* to *Q* the main wall is lost, but at this latter point we come upon rock-cuttings, and hence to *R* the line of the wall can be made out, in a straight line, by the leveling of the tops of the rocks for the reception of the blocks. All along this part of the west wall the side of the plateau is fairly steep and quite high, perhaps 15 m. above the road to Thebes. The slope, except toward the top, is not rocky, but of earth. Below the stretch *QE*, at two points appear short lengths of what at first sight looks like early polygonal masonry; but a closer examination shows that it is late work. The stones are very roughly fitted, and in one or two cases have apparently been taken from an early wall of cut blocks. One block shows a hole, apparently made for an iron anchor or clamp. Just below the point *R* is a grave-cutting.

From the point *R*, the northwest angle, till half-way between *S* and *T*, the wall remains are short lengths of rough wall made of small stones and tiles laid in mortar. No trace exists of an earlier wall except at *S*, where there are two pathways cut a few centimetres deep in the rock, meeting in the line of the wall at an obtuse angle, just outside which a large rock projects, its top cut away flat and level. This may have been a small gate where met two paths, coming up from below. A little to the west of *T*, the rock has been cut away perpendicularly for a few metres, the wall running along its edge. Hence to *U*, the wall, 3.30 m. thick, can be seen just above ground, and belongs apparently to the second period. The remains of one or

two towers can just be made out. From *U* to *V* the wall runs east, down hill. Very little is left of it, and that little is mainly of small, rough stones, without mortar—very late work. No trace could be found of the wall figured to the north of this by both Leake and Stanhope. 30 m. south of *V*, there are 4 m. of a wall running north and south, apparently of the same style as the lower cross-wall, and a continuation of it. But there are so many late house-walls in this region that this is not certain. At *V*, all traces disappear, and the next sight of the wall is at *W*, 234 m. to the northeast of *V*, on the east slope of the western valley. Hence the wall runs in a straight line about due east for 150 m., disappears where it formerly cut across the eastern valley and brook, reappears 50 m. further on, and thence runs 187 m. to the northeast angle of the plateau. This wall, though barely projecting above ground, can easily be seen, especially at its eastern end, where the outer or northern face projects a metre or more above the surface. It is built in almost exactly the style of the upper cross-wall, the oblique up-and-down joints, the step-cuts, the peculiar tower-angles, and the wider foundation being all present; the stones large, well-fitted, and with furrowed, bulging faces. From *X* westward to near the brook, the courses, though horizontal, descend step by step, following the gentle slope of the small ravine, thus proving that this ravine existed when the wall was built. As the valley to the west is the larger, we can infer, though there is no wall there to prove it, that it also existed at the same period. The slope down from all this stretch of wall (east of *V*) to the plain is gentle and entirely of earth. At the northeast angle, *X*, there was a round tower, about 10 m. in diameter. Only four such towers appear; there being one between *S* and *T*, on the north wall, and two on the east wall, to be noted later. This one at *X* is built in the same style as the rest of this part, but very little of it remains.

From *X*, the wall, fairly well preserved, and for some distance overgrown with bushes, runs due south, then turns a little toward the west and disappears near *A'*, just beyond a small ilex tree, some 5 m. high, the only tree on the plateau. All this stretch of wall is of the second period, not as well built as *WX*. Hence to near *Church No. V*, the wall can be traced running a little west of south, sometimes entirely destroyed, and again fairly well preserved. All the remains are of the second period. At *B'*, a wall, 2.80 m. thick, runs almost at a right angle for 27 m. down the slope toward the brook, here distant 35 m.

from the main wall. This offshoot-wall is of rougher and apparently late masonry. Inside the main wall, due west of *B'* at a distance of 17 m., are remains of a square building, measuring about 8 m. each way, with a small threshold—probably a late Byzantine structure. At *E'*, traces of a round tower can be made out. The slope down to the brook all along this east wall is very gentle, no rock crops out, and the soil is apparently deep. At *K'*, near *Church No. V*, all traces disappear, but at *L'* we make out a bit of wall, and hence trace it, at intervals, to *P'*. The only rock along all this stretch is a narrow ridge running from *L'* to *N'*, along the top of which the wall was built, as shown by the cuttings. At *O'* there are traces of a round tower. Too little remains of this stretch, south of *L'*, to determine its period; but it probably belongs to the first, that of the extreme southern part. At *P'*, both faces of the wall can be seen, and hence to *A* it is fairly preserved, though not high above the surface—less than a metre. It is all 3.30 m. through, and of the same period, the first, as that near *A*, described above. At a point 37 m. from *A*, there is a cutting in the wall—traces of what may have been a threshold. The slope to the south down into the small ravine which separates the wall from Mt. Kithairon is very gentle, though in one or two places the wall runs along rather steep rocks. At *P*, the wall is nearly 150 m. from the mountain slope, while at *A*, as stated above, it is only 50 m.

This completes the survey of the walls, and a few remarks may be made as to the area included within them. It seems probable, from the apparently greater age of the walls there and from its height above the rest of the plateau, that the extreme south end was the original acropolis. Search was made for an old north enclosing-wall, but no trace of such a wall was found. Such a wall probably existed near where the upper cross-wall now stands, but running more east and west. The plateau, as has been said, sloped down to the north, the northern half being comparatively level. The southwestern part is very rocky, the natural rock here jutting out in large rough masses, while the southeastern part is almost free from rock, except the ridge between *L'* and *N'*. The middle zone (between the north and south parts) is rocky on its western side, while to the east it is mostly good soil. The northern third is entirely free from projecting rocks except along its western and northwestern edges. Inside the lower cross-wall (to the north of it), and for a little distance to the east, the ground is entirely uncultivated, owing to the circum-

stance that it is covered with potsherds, broken tiles, and small stones, while to the east, on both sides of and between the two ravines, the soil is deep and fertile.

Apart from the ruined churches, there are few objects of interest above ground on the plateau. East of *D*, in the southwest, there is cut in the rock what is probably a threshold, facing west, 2 m. in length. Beyond this, to the east, there is a semicircular area in the rocks, some 15 to 20 m. across; and about 3 m. lower than this, to the north, there is a similar area. Both areas are level and apparently made by the hand of man. Southeast of *Church No. IV*, appear what are called on the map, "Votive Cuttings." These consist of seven or eight small rectangular holes or niches cut in the rock for the reception of votive or other tablets. To the south of them is a small level plateau, with some roughly hewn wall-stones. The wall to the east of *Church No. IV* is a very well built and preserved one of rubble and mortar. It is 32 m. long by 1.15 wide, and runs almost due north and south. To the south of this extends in the same line a series of eight square piers, 1.15 m. square, of the same materials, the first one distant 15.40 m. from the south end of the wall. The first seven piers are uniformly distant from one another 1.75 m., and from the spacing we judge that four are probably missing between the seventh and eighth remaining piers. No traces are left above ground of any wall to the south, but the broad level space to the east of the wall makes it seem probable that a large building, or some such feature as an agora, once existed here.

There are four springs and brooks in the immediate vicinity of the plateau, besides the two very small ones in the northeast part. One brook on the east side rises in a spring a short distance due south of *P'* and flows northerly along the whole east side, at a distance from the wall varying from 20 to 100 m. The brook on the west begins at a point southwest of the older wall, flows northwest, is joined by the water from *Megale Brysis*, below *O*, and thence flows to the northwest away from the city into the *Oëroë*. Some 250 m. to the east of the plateau is another spring called *Kondati*, where are two inscriptions and some architectural fragments. Between this and the brook to the east of the walls is a ridge on which are the ruins of a small church and a number of large hewn blocks.

On the whole plateau there is a remarkable lack of white marble. The pieces remaining are confined almost entirely to the ruined By-

zantine churches, *Churches Nos. I, IV, V, VII and VIII* being the richest in them. The greater number are Roman architectural pieces, architraves, capitals and bases, etc. There are some Greek slabs and other marbles, some with inscriptions, all built into the church-walls, and some reworked into Byzantine forms. A few fragments of white marble, small pieces of cut and sculptured work, are found on the ground on the northwest part; and to the east of *Church No. I* lies a portion of a Roman plain white marble column. The two springs of Megale Brysis to the west and of Kondati Brysis to the east have walls made of ancient fragments of white marble. All this marble is much like the Pentelie, but undoubtedly comes from a much nearer quarry.

I will close with a few remarks as to the different periods of settlement of the plateau. As already stated, it seems probable that the extreme southern end was the earliest citadel, if not the only part occupied before the time of the battle of Plataia. Then, later, a town was built lower down in the northern part (the upper citadel probably being abandoned), the upper cross-wall being built for its defense. This town very probably covered the whole of the plateau to the north of the wall. The apparently greater age of the walls to the east and west makes it seem likely, however, that the whole plateau was inhabited and fortified before the shrinkage within the upper cross-wall, which is probably of about the time of Alexander. At a much later date, in Byzantine times perhaps, the lower cross-wall was rather hastily and carelessly built to surround the much shrunken town. The fact that the ground inside this wall is deeply covered with tiles, etc., and the number of house-walls, point to the conclusion that a densely populated town once occupied this part of the plateau. The great number of churches on and in the immediate vicinity of the plateau, ten in all, also tends to prove the same, and is a circumstance important in the later history of the place, and one which may explain the great scarcity of white marble, this probably having been burned to make mortar.

HENRY S. WASHINGTON.

Tarragona, Spain,

May 23, 1890.

IV. NOTES ON THE BATTLEFIELD OF PLATAIA.

Those who admire the greatness of ancient Athens cannot fail to feel an interest in Plataia, the gallant little city which stood by the side of Athens on the field of Marathon and was equally faithful in the still darker hour of the Peloponnesian war. It would be of interest to follow at length the fortunes of Plataia. But the aim of this paper is more limited; its purpose is to examine the statements of ancient writers that throw light on the topography of the battlefield, where the victory of Salamis was made complete.

Diodoros, Strabo, Plutarch, and Pausanias have been consulted, but the authorities by which all others have been tested are Herodotos and Thoukydides; for they stand nearest to the battle of Plataia, and their works bear most clearly the marks of simple truth.

The story of the battle as told by Herodotos (ix. 15 ff.) is in brief as follows: After Mardonios had captured Athens for

STORY OF THE
BATTLE.

the second time, and had flashed the news to the Persian king by beacon-fires, he retired from Attika through Dekeleia to Skolos in the Theban country. He extended his forces along the Asopos from Erythrai, past Hysiai, into the Plataian territory and strengthened part of his camp by means of a wooden fort, ten stades square. The Greek forces came to Erythrai and took their

FIRST POSITION
OF THE GREEKS.

stand on the skirts of Kithairon opposite the enemy; but the Persian cavalry harassed them. The Megarians, who were in a place easily accessible to cavalry, suffered most until a volunteer band of three hundred Athenians went to their aid. In a skirmish which followed, Masistios, the commander of the Persian cavalry, was slain, and his body was captured by the Greeks. The Persians in their mourning shaved themselves, their horses, and their cattle, and filled Boiotia with their lamentations. The Greeks bore the body in triumph through their ranks, and were encouraged to take a more convenient position for their camp, where they would have a better water supply. They advanced along the skirts of Kithairon, past Hysiai, into the Plataian district, and took their stand near the spring Gargaphia and the sacred enclosure of

SECOND POSITION.

the hero Androkates, their line extending over low hills and level ground. The Lakedaimonians held the right, and the Athenians, after a dispute with the troops from Tegea, occupied the left. The Tegeans were solaced with a position next the

Lakedaimonians, and the Plataians stood next the Athenians. The rest of the Greeks held the centre. The enemy were soon at hand and formed their line of battle. Opposite the Lakedaimonians were the Persians; then came the subject nations; and at the other end of the line were the medizing Greeks. The Asopos divided them,¹ and the prophets on both sides advised acting on the defensive. For eight days the armies faced each other, and the Greek force continually grew stronger. On the night of the eighth day, Mardonios sent to the pass Dryoskephalai² a troop of cavalry, which captured a large supply-train on its way to the Greek camp.

On the eleventh day Mardonios, not wishing that the Greek forces should be further strengthened, resolved upon giving battle. This purpose was communicated to the Greeks that night, and the Lakedaimonians asked the Athenians to change places with them, because the Athenians had already faced the Persians at Marathon. This change was made; but, in the morning when the enemy observed it, Mardonios moved the Persians to his right wing, so that they once more faced the Lakedaimonians. Pausanias, the Lakedaimonian commander, seeing that he had gained nothing by the change, went back to his former position and the Persians did the same. Mardonios, after sending a taunting challenge to the Spartans, ordered a cavalry charge. The cavalry captured the spring Gargaphia and choked it up. This cut off the water supply of the Greeks; for it was unsafe to go to the Asopos on account of the horsemen and bowmen. They determined to move that night to the Island, where

THIRD POSITION.

they would have water in abundance and be free from the assaults of the Persian cavalry. When the time came, the Greeks in the middle of the line did not march to the appointed place, but were glad to flee from the enemy's cavalry toward Plataia, and came to the Heraion before the town. The Lakedaimonians on the right were detained by the obstinacy of Amompharetos, who refused to retreat before the enemy, while the Athenians on the left remained where they were, because they did not think the Lakedaimonians

¹ Part of the Persian forces may have been south of the Asopos. The Persian cavalry were continually active on the south side of the river. Cf. HERODOTUS, ix. 40.

² Also called Treiskephalai; because one looking south from the valley of the Asopos can distinguish three peaks of Kithairon in the neighborhood of the pass, through which the road from Athens to Thebes now passes. There was another pass from Megara. Cf. XENOPHON, *Hell.*, v. 4. 14; VIESCHER, *Erinnerungen aus Griechenland*, p. 533.

meant to carry out the arrangement in good faith. As dawn approached, Pausanias left his obstinate captain, who soon followed him, and retired ten stades to a place called Argiopoulos on the banks of the Molois, where there was a temple of Demeter. On the retreat the Lakedaimonians kept to the hills, but the Athenians turned down into the plain. When the Persians saw the Greek position deserted, they set out to pursue, as they supposed, a fleeing enemy. They advanced on the Lakedaimonians, for the Athenians in the plain were hidden from them by the hills. The sacrifices were unfavorable for the Lakedaimonians, and they were being wounded without striking a blow, until Pausanias looked away toward the Heraion and prayed that they might not be disappointed in their hopes. Here by the temple of Demeter the battle was fought and the Persians were routed. The Boiotians kept the Athenians employed till they too were routed and fled to Thebes. The Persians had fled to their wooden fort. When the Greeks at the Heraion learned that the Persians were fleeing, they set out in two detachments. One passed among the hills at the base of the mountain on the way which led up straight toward the shrine of Demeter; the other moved through the plain till it fell in with the Theban cavalry, which charged it and drove it into the mountain. The Persian fort was soon stormed and great slaughter followed.

This outline shows that Herodotos gives three positions of the Greek troops, which we shall endeavor to determine. But first let us fix the more permanent features, such as the Island, the spring Gargaphia, the temple of Demeter, the Heraion, and the shrine of Androkrates.

The ruins of Plataia² lie on a plateau at the foot of Kithairon about two miles and a half from the Asopos, which flows at this point in a comparatively straight line toward the east. This is enough to form the basis of our investigation. To begin with the Island. Herodotos (IX. 51) says: "This Island is before the city of the Plataians, distant ten stades from the Asopos and the spring Gargaphia, at which they were then encamped. And under the following circumstances there would be an island in a continent. The river branches and flows down from Kithairon into the

²See the MAP (PLATE XXIII). For other maps, see LEAKE, *Travels in Northern Greece*, vol. II; STEIN, *Herodotos*, vol. V; GROTE, *History of Greece*, ch. 42; STANHOPE, *Topography of the battle of Plataea*; BOCAGE, *Travels of Anacharsis*, pl. 6.

plain, with its streams about three stades apart, and then comes together. Its name is Oëroë, and the natives call it 'the daughter of Asopos.'³

Again Herodotos (IX. 51) speaks of the Island as the place "which Oëroë forks about as it flows from Kithairon." From this we gather that the Island was: (a) before the city of Plataia; (b) ten stades from the Asopos and Gargaphia; (c) three stades wide; and (d) that it ended in the plain. And in the plain before Plataia, ten stades from the Asopos, we must accordingly find one point of the Island.

The statement of Herodotos, that the island is "ten stades from the Asopos and the spring Gargaphia, at which they were then encamped," makes it important to fix the position of the troops at this time. Herodotos (IX. 25) says the forces went "from Erythrai past Hysiai to the Plataian territory, and on arriving took up their position by nations near the spring Gargaphia and the sacred enclosure of the hero Androkrates, over low hills and level ground."⁴ Later, Herodotos (IX. 49) says the Persian cavalry choked up the spring Gargaphia, from which all the Greek army procured water. "Now the Lakedaimonians alone were posted at the spring, while for the rest of the Greeks the spring was distant as every contingent happened to be drawn up, and the Asopos was near; but being kept back from the Asopos they continued to resort to the spring, for it was not possible for them to get water from the river on account of the horsemen and arrows." The left, then, held by the Athenians, was near the Asopos, and the line extended away from the river to the spring Gargaphia, where the Lakedaimonians held the right. When Herodotos (IX. 51) says that the Island to which they proposed to retreat was ten stades from the Asopos and from the spring Gargaphia, he seems to imply that each end of the line would fall back ten stades to the Island; in which case the new line would be about parallel to the old. Acting on this supposition, we draw, from the part of the Island which we have fixed, a circle with a radius of ten stades, and the left of the Greek line will lie on this circle near the Asopos.

At the other end of the line was Gargaphia—(a) ten stades from the Island,⁵ (b) near low hills and level ground, accessible to cavalry,⁶ (c) ten stades from the temple of

³ DIODOROS says (XI. 30) that the Greeks, in their second position, had on their right a high hill and on their left the Asopos, and here they won their victory.

⁴ HERODOTOS, IX. 51.

⁵ IX. 25, 49.

Demeter,⁷ and (d) twenty from the Heraion.⁸ We cannot allow less than twenty-four stades for the length of this line. There were 110,000 men in all.⁹ Of these, 38,700 were heavy-armed troops. Supposing these heavy-armed men to be drawn up eight deep, as was common in the fifth and fourth centuries B. C.,¹⁰ and, allowing three feet front for every man with his shield, we shall have a line about twenty-four stades long. That the estimate of twenty-four stades is not far from right, will be evident when one considers that this line was supported by 71,300 light-armed troops. Gargaphia will then be on the circumference of a circle whose radius is twenty-four stades, and whose centre is the Athenian position. Our line must not swing too far to the south away from the river, or the spring Gargaphia will not be twenty stades from the Heraion, which is near Plataia.¹¹ On the other hand, it must not swing to the north toward the river; for it must be within ten¹² stades of the temple of Demeter, which, as we shall show, was on high ground; and we have seen that the spring was distant from that part of the line which was near the river. We therefore place the spring east of Plataia among the "low hills" of the Asopos valley, where are several springs, one of which Leake names Gargaphia.¹³

Taking Gargaphia as a centre, we draw a circle with a radius of ten stades to find the temple of Demeter about which the battle was fought. Herodotos (IX. 57), speaking of the retreat of Pausanias from Gargaphia, says:

TEMPLE
OF DEMETER.

"This column, drawing off about ten stades, waited for the company of Amompharetos, taking position on the banks of the Molois, and in a place called Argiopios where stands a temple of Eleusinian Demeter." Just before the battle, Pausanias "looked away toward the Heraion of the Plataians."¹⁴ When the Persians were put to flight, the Corinthians and others at the Heraion "turned along the skirts of Kithairon and the hills on the way which led up straight toward the shrine of Demeter."¹⁵ The temple of Demeter, then, was on the circumference of the circle—(a) ten stades from Gargaphia, (b) on the river Molois, (c) up hill from the Heraion, (d) so situated that an observer standing near it could see the Heraion, and (e) at a place

⁷ HERODOTOS, IX. 57: cf. 49.

⁸ IX. 52.

⁹ IX. 29, 30.

¹⁰ HANS DROYSEN, *Die griechischen Kriegsmittelthümer*, in K. F. Hermann's *Lehrbuch der gr. Antiquitäten*, II, 2^{te} Abt. p. 44.

¹¹ HERODOTOS, IX. 52.

¹² IX. 57: cf. 49.

¹³ *Op. cit.*, II, 332 f. PAUSANIAS (IX. 4. 3) says that the spring was restored.

¹⁴ HERODOTOS, IX. 61.

¹⁵ IX. 69.

called Argiopios. This name, "White Rock,"¹² may help to identify the spot. We cannot place it very far to the south, for the troops from the Hernion passed to it over the foot-hills of Kithairon. We may suppose that it was west of Gargaphia, for Pausanias originally intended to go to the Island, and Plutarch¹³ says that he retired toward Plataia. We therefore place the temple of Demeter on high ground southeast of Plataia at a point where are now the foundations of a large Byzantine church.¹⁴ Back of it rises a wall of rock which is visible for miles in the valley, and may have given to the place the name of Argiopios. The Lakedaimonians who were at this point could be seen easily by the Persians in the valley of the Asopos; while the Athenians in the plain north of Plataia would be hidden by the foot-hills northeast of the town.¹⁵ From the rising ground a few rods east of the church one can see the lower half of the ruins of Plataia where the Heraion may have stood. The conclusion with regard to the position of the temple of Demeter, which we reach from our study of Herodotos, receives a curious confirmation from a statement of Pausanias. Pausanias comes down from Kithairon to Plataia, and, after speaking of the monuments¹⁶ of those who fought against the Mede, and the altar of Zeus "just about opposite the entrance to Plataia," he says (IX. 2. 6): "But the trophy which the Greeks set up for the battle at Plataia stands about fifteen stades further from the city." The trophy (*τροπαιον*) was set up on the battlefield in memory of the turning of the enemy to flight (*τροπη*). In this case the battlefield was about the temple of Demeter. Herodotos (IX. 62) says: "The battle waxed hot right by the temple of Demeter," and again (IX. 65): "It is a marvel to me how not a single one of the Persians, who fought beside the grove of Demeter, appears to have gone into the sacred enclosure or to have died within it, though very many fell about the temple on the unconsecrated ground." Measuring from the en-

¹² PAPE, *Wörterbuch der griechischen Eigennamen*.

¹³ *Aristides*, 17.

¹⁴ About six minutes walk east of the spring Vergoutiani. Here have been found Greek sepulchral steles, inscriptions, bits of Roman mosaic, and numerous fragments of marble. No doubt the temple became popular after this battle, and continued so down to Roman times. PLUTARCH describes it as "under the projecting foot of Kithairon in places rough and rocky." *Arist.*, 14; cf. 11.

¹⁵ HERODOTOS, IX. 59: ἐπὶ τῶν ἑχθρῶν.

¹⁶ PLUTARCH (*Arist.*, 20) mentions one set up by the Lakedaimonians, and one by the Athenians. LEAKE (II. 366) wrongly places the trophy at the gate of Plataia beside the tombs.

trance to Plataia "about" fifteen stades, we find the point which we had already fixed for the temple of Demeter.

The so-called Island was ten ²⁰ stades from Gargaphia, and so must touch the circle on which the temple of Demeter stood.

THE ISLAND.

A number of streams flow down from Kithairon on the east of Plataia, and turn to the west, where they unite to form the Oëroë which flows into the Korinthian Gulf.²¹ The modern traveller is unable to discover any such island as Herodotos seems to describe. Leake²² and Vischer²³ are inclined to think that it was rather a narrow peninsula formed by two of these branches, which was popularly called by the inhabitants the "Island," a name misleading to one not acquainted with the place. Herodotos does not speak as if he had verified the statement that it was entirely surrounded by water. He prefaces his description (ix. 51) with: "and there would be an island in a continent under the following circumstances." It would not be difficult to find parallels for such a use of the term "Island." Long ridges run out from Kithairon between the water-courses; and on one of these ridges, which the Plataians called the "Island," the Greeks proposed to take their stand. On rising ground with a stream in front they could defend themselves from the enemy's cavalry, while the stream behind them would furnish water.

It is important that we should fix the position of the Heraion. The language which Herodotos uses seems to associate it

THE HERAION.

closely with Plataia. He calls it (ix. 61) the "Heraion of the Plataians," and, like the Island, it is "before the city of the Plataians,"²⁴ an expression which seems to point toward the valley. It was distant twenty ²⁵ stades from Gargaphia. It will therefore be on the circumference of a circle whose centre is Gargaphia and

²⁰ HERODOTOS, ix. 51.

²¹ Cf. VISCHER, *op. cit.*, p. 547; LEAKE, II, p. 324.

²² II, p. 357 ff.

²³ P. 547 f. LEAKE claims that this is all that Herodotos means; but *περὶ χίεσαι*, and Herodotos' general treatment of the subject exclude this view. VISCHER thinks it possible that such an island existed in antiquity.

²⁴ HERODOTOS, ix. 52; cf. 51. PLUTARCH (*Arist.*, 11) calls Hera Kithaironian. PAUSANIAS (ix. 2. 7.) saw in her temple a large standing statue of the goddess by PRAXITELES. Plataian coins of the time of Praxiteles bear the head of Hera. Cf. IMHOOF-BLUMER and GARDNER, *Numismatic Commentary on Pausanias*, pp. 110-111. The same temple contained a Rhea and a Kronos by Praxiteles, and a seated statue of Hera by Kallimachos.

²⁵ HERODOTOS, ix. 52. LOLLING, in *Baedeker's Greece*, places the Heraion twenty stades outside the city (7). On a circle of twenty stades radius from Gargaphia, within

whose radius is twenty stades. Herodotos says that the Greeks in the middle of the line were "glad to flee from the cavalry, and in their flight came to the Heraion, which is before the city of the Plataians, twenty stades from the spring Gargaphia;" and "these encamped about the Heraion." The Heraion was therefore in the direction of Plataia from the middle of the line, and the site was probably unfavorable for a cavalry attack, or the Greeks would not have halted so comfortably. If it was in the northern part of the plateau upon which Plataia lies that they halted, they would be protected on the west and north; for at this point the plateau rises somewhat abruptly from the plain. Leake and Vischer place the Heraion in the northern part of the present walls of Plataia. Both²⁶ note the statement of Thukydides, that the ancient city was small, and observe that the walls at the south angle are the most ancient. The present ruins of Plataia are not less than two miles and a half in circumference. Leake and Vischer conclude that the later walls were extended from the south so as to include the temple of Hera, which was outside the city at the time of the Persian war. Pausanias seems to place the Heraion within the city, though his statement is not definite. After describing the altar and statue of Zeus Eleutherios near the entrance to Plataia, he says:²⁷ "In the city itself . . . is the heroön of (the divinity) Plataia, and I have already told what is said with regard to her, and what I myself surmised; and (δε) the Plataians have a temple of Hera notable for its size and the beauty of its sculptures." If Pausanias saw a temple of Hera within the city, it was not necessarily the Heraion of Herodotos; for, when the Peloponnesians captured Plataia, they razed the city;²⁸ and built near the Heraion a large inn, which they dedicated to Hera. They also built to her a temple one hundred feet long, which was probably the large temple seen by Pausanias. Vischer finds traces of a quadrangular building within the northern part of the city, and concludes that there is scarcely any doubt that this is the temple of Hera. But, in truth, there is abundant room for doubt. This part of

the northern part of the present walls of Plataia, is a ruined Byzantine church containing numerous fragments of a large Ionic temple (MAP, *Church No. 1*). A fragment of a decree by Diocletian was found here in 1889 by the American School of Classical Studies at Athens. Several other sites would satisfy the conditions of Herodotos' account.

²⁶ LEAKE, II. pp. 325 f., 360 f., 364. VISCHER, p. 543 ff.

²⁷ PAUSANIAS, IX. 2. 7.

²⁸ THUKYDIDES, III. 68. 3-5.

the city is covered with foundation-walls, and the mere fact that there had been a large temple in any place would prove nothing; for Pausanias speaks of a temple of Athena at Plataia,²⁰ a heroön of Plataia,²¹ and a temple of Eleusinian Demeter,²² which may however be the one referred to by Herodotos. Plutarch (*Arist.*, 20) mentions a shrine of Artemis Eukleia. Successful excavation alone can fix the exact position of the temple of Hera.

The heroön of Androkrates²³ was somewhere on the line of battle which we have determined. Thoukydides (III. 24) says that those who escaped over the besieging walls of the Peloponnesians "went on the way leading to

HEROÖN OF
ANDROKRATES.

Thebes, having on their right the heroön of Androkrates." They saw the enemy pursuing them with torches toward Kithairon and Dryoskephalai. "They proceeded for six or seven stades on the way toward Thebes, then turning back they advanced on the road leading toward the mountain to Erythrai and Hysiai, and getting into the mountains they escaped to Athens." If the fugitives travelled only seven stades toward Thebes, and had the heroön of Androkrates on their right, this heroön must have been nearer to Gargaphia than to the Asopos. Stein²⁴ and Grote say that the spring was on the right of the Greek line of battle, and the heroön on the left, which is impossible, for the left was near the Asopos, almost twenty stades from Plataia. Plutarch places the heroön at the foot of Kithairon, near the temple of Demeter.

Our next task is to fix the positions occupied by the forces. Of the Persian position Herodotos (IX. 15) says: "Mardonios, bivouacking for the night in Tanagra, and turning on the next day to Skolos, was in the country of the Thebans. . . . He let his camp extend from Erythrai along by Hysiai, and

²⁰ PAUSANIAS, IX. 4. 1; PLUTARCH, *Arist.*, 20. This temple, according to Pausanias, was built from the spoils of Marathon. It contained a colossal gold and marble statue by Phaidias, and was adorned with paintings, "Odysseus after the slaughter of the suitors," by Polygnotos, and "The Seven against Thebes," by Onasias. Before the feet of Athena was a portrait of Arimnestos, the Plataian commander at Marathon and Plataia. Plutarch says the temple was built from the Plataian share of the spoils.

²¹ PAUSANIAS, IX. 2. 7.

²² PAUSANIAS, IX. 4. 3. Pausanias may use *ἐκ Πλαταιῶν* loosely for *ἐκ Πλαταιῶν γῆς*. Cf. HERODOTOS, IX. 25; *ἐκ Πλαταιῶν*, 31. 41; *ἐκ Πλαταιῶν*. Pausanias seems to be thinking of the account of Herodotos; for in the next sentence he speaks of the restoration of Gargaphia, which Mardonios and his cavalry destroyed.

²³ HERODOTOS, IX. 25. A hero of Plataia; cf. PLUTARCH, *Arist.*, 11.

²⁴ Note on Herodotos, IX. 25, l. 18; cf. GROTE, *History of Greece*, vol. v. p. 19, Note 2.

advanced it along the Asopos river into the Plataian territory. However, he did not make his entrenchment so large, but made each side about ten stades."³⁴

Skolos, Erythrai, and Hysiai were towns on the skirts of Kithairon ;
 SKOLOS, Skolos on the east, and Hysiai on the west, with
 ERYTHRAI, AND Erythrai between. Skolos³⁵ was on rough ground
 HYSIAI, near the Asopos, forty stades below the point where
 the road from Plataia to Thebes crossed the river. Hysiai and Erythrai³⁶ were near together, a little to the right of the road which crossed Kithairon from Eleutherai to Plataia. Plutarch (*Arist.*, 11) says : "Near to Hysiai is an ancient temple called the temple of Eleusinian Demeter and Kora." He further describes the place as near the heroön of Androkrates in the foot-hills of Kithairon. That the temple of Demeter and the heroön of Androkrates were not far apart is possible from what Herodotos and Thoukydides say ; but that they should be near Hysiai would be inconsistent with the account of Herodotos. For, when the Greeks moved from Erythrai, their first position, to their second position, they passed Hysiai.³⁷ Then, when the Lakedaimonians fell back ten³⁸ stades from this second position, they came to the temple.³⁹

The camp of Mardonios occupied the plain of the Asopos, and extended past Hysiai into Plataian territory. At least
 CAMP OF MARDONIOS. part of the camp was south of the Asopos, and there is nothing to show that the wooden fort was north of

³⁴ DIODOROS (XI. 29, 30) says Mardonios came from Thebes.

³⁵ STRABO, 403, 409; PAUSANIAS, IX. 4. 4; LEAKE, II, 330 f., 369. Pausanias saw here an unfinished temple of Demeter and Kora.

³⁶ PAUSANIAS, IX. 2. 1; STRABO, 404; LEAKE, II, 327-329. HERODOTOS (V. 74) mentions Hysiai with Olincos as a frontier-deme of Attika. At Hysiai, Pausanias saw a half-built temple of Apollo and a sacred well.

³⁷ HERODOTOS, IX. 25.

³⁸ IX. 57.

³⁹ PLUTARCH may use "Hysiai" loosely for "the district of Hysiai" (see Note 31). At the foot of Kithairon, near Kriekouki, east of the road from Athens to Thebes, are remains of an ancient acropolis. Along the brow of the rock one can follow the wall with some difficulty. On the other side of the road is an ancient well, now dry, which was perhaps the sacred well of Hysiai. Near here were found two dedicatory inscriptions to Demeter, belonging to the first half of the fifth century. Cf. FOUCART, *Bull. de corr. hellén.*, 1879, p. 134, N. 1; ROBERTS, *Epigraphy*, 223. One objection to placing the Plataian temple of Demeter here has been pointed out above. Moreover, Pausanias, who speaks of the Plataian temple of Demeter, saw Hysiai in ruins. It is not impossible that Hysiai also had a temple of Demeter, as had Skolos (PAUSANIAS, IX. 4. 4). PLUTARCH himself says that the temple of Demeter, at which the Greeks halted, was near the shrine of the Plataian hero Androkrates, which must have been nearer Plataia.

the river. The camp of the Medes extended "along by Hysiai into the Plataian district."⁴⁰ Exactly the same expression is used of the Greeks who went from Erythrai across the skirts of Kithairon "along by Hysiai into the Plataian district." The expression "into the Plataian district" could hardly have been used, if part at least of the Persian forces had not been south of the Asopos. There is no proof that the Plataian territory ever extended north of the Asopos; on the contrary, there is proof that at first it did not extend as far as the Asopos. Herodotos tells⁴¹ us that when the Athenians espoused the cause of the Plataians against the Thebans, they passed over the bounds which had been fixed for the Plataians, and "made the Asopos the boundary between the Thebans and the Plataians." Pausanias (II. 6. 1; IX. 4. 4) speaks of the Asopos, which forms the boundary between the Theban and the Plataian land; and again he says: "Even yet the Asopos separates the land of the Plataians from the Thebans." We are told that the Persians fled to their wooden fort in the Theban territory;⁴² but this does not prove that the fort was north of the Asopos. We have seen that, before the Athenians interfered, the Theban territory extended across the Asopos opposite Plataia. This was doubtless the case at Erythrai; for Strabo (409) tells us that all the villages along the Asopos at this point were under the Thebans; though he adds that some say that Skolos, Eteonos, and Erythrai are in the country of the Plataians. Herodotos himself (IX. 15) places Skolos in the Theban territory.

While Mardonios was encamped here in the plain of the Asopos, the Greeks came to Erythrai, and, as Herodotos says,⁴³ observed that the barbarians were encamped on the Asopos; and perceiving this they took their stand on the skirts of Kithairon facing the enemy (*ἀντετάσσοντο*);⁴⁴ and Mardonios, as the Greeks did not descend into the plain, sent against them all his cavalry. Masistios, commander of the cavalry, was slain, and the Greeks bore his body along their ranks on a wagon, a circumstance which throws light on the nature of the ground.

⁴⁰ HERODOTOS, IX. 15; cf. 25. The wooden fort may have been extended across the river for the sake of a better water supply. The valley widens conveniently at this point.

⁴¹ HERODOTOS, VI. 108: 519 B. C. Cf. THUCYDIDES, III. 68.

⁴² HERODOTOS, IX. 65.

⁴³ IX. 19 ff.; cf. DIODOROS, XI. 29, 30.

⁴⁴ LEAKE, who places the Persians on the other side of the Asopos, bases his view on this *ἀντετάσσοντο*, which can have no more definite meaning than we give to it. See *Northern Greece*, II, 340, Note.

The Greeks moved to their second position which we have fixed ; and, "when Mardonios and his barbarians had finished mourning for Masistios, they, too, were at hand at the Asopos which flows here."⁴⁵ Most of the Persian forces were north of the river ;⁴⁶ for "the sacrifices were favorable for the Greeks, if they kept on the defensive, but unfavorable, if they were to cross the Asopos and begin the battle." "The barbarians advanced as far as the Asopos to make trial of the Greeks, but neither side crossed."⁴⁷ On the day of the battle, Mardonios led the Persians across the Asopos on the run.⁴⁸ With regard to the position of the forces on the day of battle but a word remains to be said.

SECOND POSITION OF FORCES. The Lakedaimonians, as we have seen, were at the temple of Demeter.⁴⁹ The Athenians were down in the plain where they fell in with the medizing Greeks. Plutarch says⁵⁰ that the Athenians, while advancing across the plain to the aid of the Spartans, were attacked by the medizing Greeks. Of the Greeks at the Heraion, one detachment went eastward to the temple of Demeter ; and the other marched north or northeast through the plain till it fell in with the Boiotian cavalry.⁵¹

THIRD POSITION OF LAKEDEAIMONIANS, ATHENIANS, AND OTHER GREEKS. After the battle, according to Herodotos (IX. 84), the body of Mardonios disappeared. Several claimed to have buried him, and were rewarded by the son of Mardonios. Pausanias (IX. 2. 2) saw a monument "said to be that of Mardonios," on the right of the road from Athens to Plataia, a little beyond Hysiai.

MONUMENT OF MARDONIOS. The Greeks buried their dead in large tombs or *polyandria*.⁵² The Spartans set up three, one for every class of citizens ; the Athenians one ; the Tegeans one ; and the Megarians and Phliasians one. Others, as the Aiginetans,⁵³ who took no part in the battle, erected cenotaphs. In the Peloponnesian war, when Plataia had been captured by siege, the Plataians pointed to these tombs,⁵⁴ and implored the Spartans to spare them for the honors which they had shown every year to the graves of "those who fell fighting against the Mede." Pausanias (IX. 2. 5) says : "Opposite the entrance to Pla-

⁴⁵ HERODOTOS, IX. 31.⁴⁶ IX. 36 f.; PLUTARCH, *Arist.*, 11, 15.⁴⁷ HERODOTOS, IX. 40.⁴⁸ IX. 59.⁴⁹ IX. 57, 62.⁵⁰ *Arist.*, 18: cf. HERODOTOS, IX. 59, 61.⁵¹ HERODOTOS, IX. 69.⁵² HERODOTOS, IX. 85. ⁵³ The Aiginetan tomb, it is said, was built ten years later.⁵⁴ THUCYDIDES, III. 58, 59.

taia are the tombs of those who fought against the Medes. The rest of the Greeks have a common monument; but the Lakedaimonians and Athenians who fell have separate tombs, and on them are inscribed epitaphs by Simonides. Not far from the common tomb of the Greeks is the altar of Zeus Eleutherios." Plutarch relates that this altar was dedicated to the Zeus of Freedom in honor of the battle for freedom at Plataia;⁵⁵ and, in describing the ceremonies which were performed every year at these tombs, he uses language which seems to place them near the city. He says: "They form a procession, which the trumpeter, sounding the charge, leads on at dawn. Wagons, loaded with myrtle and garlands follow. A black bull is led in the procession, and free-born youths advance bearing drink-offerings of wine and milk, vessels of olive-oil and myrrh. A slave is not allowed to touch any of the things connected with that service because the men died for freedom. Finally, the archon of the Plataians, who is not allowed at any other time to touch iron,⁵⁶ or to put on any but a white garment, then clad in a purple tunic, and armed with a sword, taking up a water-jar from the place where the records are kept, leads on through the midst of the city. Then, taking water from the spring,⁵⁷ he himself washes the steles,⁵⁸ and anoints them with myrrh. Slaughtering the bull upon the altar for burnt sacrifice, and, praying to Zeus and Hermes Chthonios, he invites the brave men who died in behalf of Greece to the banquet and the offering of blood. Then mixing a bowl of wine and pouring it out, he says: 'I drink to the men who died for the freedom of the Greeks.'⁵⁹

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⁵⁵ PLUTARCH, *Arist.*, 19-21. Inscription on the altar:

Τάδε τοῦ "Ἑλλήνων νίκης κρατῆ, ἔργῳ Ἀρηῶν,
ἐπὶ δαυρ ψυχῶν λήαντι πεπόμενοι
Πέρσας ἠελάσαντες, ἐλευθέρῳ Ἑλλάδι κοινῇ
ἰδρῶσαντο Διὶ θεῷ ἐλευθερίῳ.

STRABO speaks of it as a *temple*, which Lenke translates "temple." Here they celebrated games called the *Ἑλευθερία*. STRABO, 412; PLUTARCH, *Arist.*, 21; PAUS., IX. 2. 6.

⁵⁶ Perhaps it would be better to say "a weapon of iron;" cf. *σιδηροφορία* in THOUKYDIDES; or simply "a weapon."

⁵⁷ DODWELL (*Tour through Greece*, vol. i, p. 280) makes this spring Gargaphia (?). The tombs were just at the entrance to Plataia, as Pausanias came from Megara. Hence the spring referred to by Plutarch is probably that on the eastern side of the ruins of Plataia, which flows out of a terrace wall, in which are Greek sepulchral steles and a piece of an Ionic cornice. The spring a mile southeast of Plataia, now called Vergoutiani, has been confounded with Gargaphia, but it is probably the spring of Artemis. LEAKE, *Northern Greece*, II, 333 f.

⁵⁸ Of bronze, PAURANIAS, IX. 2. 5.

CORRESPONDENCE.

C. H. MOORE'S "GOTHIC ARCHITECTURE."

To the Managing Editor of the American Journal of Archaeology.

Sir:—In the course of your review of my book, *Development and Character of Gothic Architecture*, published on pp. 145-50 of this volume of your Journal, you make some remarks, and some strictures, to which I beg leave to say a few words in reply.

I cannot agree with your assertion, that *Viollet-le-Duc's geographical division of French schools was shattered by Quicherat* (p. 147). There is no necessary conflict between such a division and that which Quicherat proposed. The geographical division has a firm basis of truth (founded, as it is, on peculiarities that grew out of ethnological distinctions and local conditions), which renders it serviceable and convenient. Quicherat's classification may have its value, but it does not supersede that of Viollet-le-Duc.

You say (p. 148): *It is apparent that, from confining his attention almost exclusively to Gothic structures, Mr. Moore has an imperfect acquaintance with Romanesque monuments. He would not otherwise have asserted (p. 16) that Romanesque builders rarely vaulted their naves, or have supposed (and marvelled at it) that semi-tunnel vaults over aisles were brought into use to support cross-vaults over the nave (p. 12); whereas, as a matter of fact, they were first used, in Provence, to sustain the thrust of the tunnel-vaults of the nave, thus explaining their raison-d'être.* The context, however, shows that I am speaking, on page 16, of the early Romanesque builders of North-Western Europe, and of these, I believe, it is correct to say that they rarely vaulted their naves. The common practice with them was to cover the nave with a timber roof only—as shown, for instance, by M. Lefèvre-Pontalis in plates II and III of his *Étude Historique et Archéologique sur la nef de la Cathédrale du Mans*. Quicherat, in his essay *L'Architecture Romane*, refers to some of the unvaulted churches of Northern France as exceptional: but they are by no means exceptional in this region. When such important buildings as the Abbaye-aux-Hommes, the Abbaye-aux-Dames, and St. Nicolas of Caen, Mt. St. Michel, Jumièges, Mans, Guibray and St. Gervais of Falaise, and many others, had only timber roofs, it can hardly be said that the vaulting of naves was the general practice. And, in fact, so far from common was it that M. V. Ruprich-Robert, one of the

most learned of French architects, and a close student of Romanesque buildings, says (p. 26), after speaking on this point in his monograph on the Abbaye-aux-Dames: *Et l'on conclura de tout ceci qu'un système de charpentes apparentes était généralement adopté à cette époque, par les Normands, pour couvrir les édifices religieux.* I may add that Quicherat himself—in his unfinished *Cours d'Archéologie* (*Mélanges d'Archéologie et d'Histoire*, vol. 2, p. 455), written thirty years after the essay *L'Architecture Romane*—admits that the naves of Norman churches were, at first, not vaulted. Regarding the semi-tunnel vault, I have not supposed that it was brought into use (i. e., first used) to support cross-vaults. I merely say (p. 12) that *the expedient was adopted* of employing such vaults in connection with the sexpartite vaulting of St. Stephens at Caen.

It is incorrect to say (p. 148) that I decline to call any English or Spanish buildings Gothic, because they are either purely French (*sic*) and therefore do not belong to the country, or because they have received local modifications and are therefore not purely French. I do not decline to call buildings Gothic on any such grounds. I decline to call them Gothic only when they fail to exhibit a Gothic system. You say (p. 149): *One cannot fail to see that Mr. Moore is inclined to magnify divergences, and sometimes even to indulge in what resembles sophistry. He fully endorses a link in transitional Gothic, such as Laon or Noyon or Senlis, where the wall-space, for example, is still largely preserved, and the windows have not yet occupied the entire space between the wall-ribs; but he would deny the Gothicity of such an arrangement in a Spanish or English building erected ten or twenty years later, because in the meantime French architecture had reached a more advanced stage.* This is erroneous. Such transitional buildings in France as Noyon, Senlis, and Laon I regard as Gothic, notwithstanding that considerable wall-spaces remain in them, because they display a growing Gothic system. But I can see no propriety in calling buildings of an advanced period Gothic in which heavy walls remain, as a final condition, essential to the structure, and in which there is no consistent development of a Gothic framework.

I am charged (p. 149) with many grave errors in what I have said of Italian pointed architecture—three of which are said to be contained in my opening statements respecting Italy. These statements are correctly quoted as follows: *During the twelfth century Gothic architecture had no marked influence upon Italy. The church of S. Andrea of Vercelli, which is said to have been begun in 1219, gives evidence, in its Gothic vaulting system, of transalpine influence; but it is an exceptional instance, and it was not before the middle of the thirteenth century that Italy began really to yield, in some measure, to the taste for pointed design.* You say (p. 149) that the church of S. Andrea at Vercelli, instead of standing as a solitary instance, is

but one in a long series which begins about 1170. I presume you refer mainly to the Cistercian edifices which are the subject of your interesting article entitled *Introduction of Gothic Architecture into Italy*. But, granting that these monuments ought to be classed with S. Andrea of Vercelli, does their sporadic existence in the country warrant the belief that Gothic architecture had a marked influence upon Italy (*i. e.*, upon the Italian builders)? Did the Italian people, at this time, show any disposition to adopt pointed forms in their own architecture (which is, of course, the question with which I am concerned in my book) before the middle of the thirteenth century? It seems to me that the incoming of French Cistercian monks, with their own architecture, interesting as that architecture undoubtedly is, has little bearing upon my main proposition.

Your remark that *Siena is not pointed* must, I think, have been made inadvertently. Any photograph will show that it is so for the most part; though, as in many other Italian buildings in which the pointed arch is used, it is not consistently employed throughout. And, though the nave of Orvieto be not vaulted, the transept and east end are, and it is, you will doubtless admit, commonly and not incorrectly, classed among leading Italian Gothic edifices. My assertion that both Siena and Orvieto differ little (structurally of course) from other pointed buildings in Italy is, I maintain, correct.

With regard to apseidal aisles and flying buttresses, the instances that you cite may show that my statement that they never occur is too strong. But to adduce these unusual instances does not materially weaken my argument. The apseidal aisle is certainly so rare that it may at least be said that it was not a characteristic of Italian pointed design. And anything like a flying-buttress is so uncommon that it must be reckoned equally foreign to the architecture of the country.

I agree with you that my treatment of German, Italian, and Spanish architecture might, with advantage, be fuller; but you have not, I think, shown that it is, in any important respects, incorrect.

CHARLES H. MOORE.

Cambridge, Mass.,

October 9, 1890.

Mr. Charles H. Moore.

Sir:—In writing my review of your book, I was guided by the opinion that it was a work of such importance that it must be carefully studied and both praised and criticised with discrimination. You will pardon me if I therefore discuss somewhat in detail your rejoinder to some of my criticisms to which you take exception.

I. The question of the relative merits of Viollet-le-Duc's geographical division of French monuments and Quicherat's structural division is one that depends largely on individual opinion and is difficult of settlement. There being no mention of Quicherat among your authorities, I concluded that you were not familiar with him. He would otherwise have been a welcome supporter of your own system which, like his, is purely structural to the exclusion of æsthetic elements. To me it seems that your own principle would force you to grant, that a geographical division can be used only in subordination to one that is structural and based upon the vaulting system employed. This is Quicherat's plan, and is the only one that is based on a scientific principle: it has been followed by many, for instance, by Corroyer in his recent volume *Architecture Romane*. Even those who still support the geographical schools, like Anthyme Saint-Paul,¹ call attention to the inadequacy of Viollet-le-Duc's division and the small number of buildings on which he based it. This is in strong contrast with Quicherat's broad knowledge of the monuments.

II. As this is hardly the place to discuss the defects of the geographical division, I shall pass to the second point, which involves the essential character of Romanesque architecture, which you appear to regard as a style characterized by wooden roofs, in opposition to the generally received opinion that it is based on the use of the vault. I fail to see that your remarks on Romanesque can be confined strictly to the Northwest:² on p. 7 they are applied to Western Europe and include Northern Italy, France, Germany and England, for you say: *The Romanesque may be broadly divided into two styles—the Eastern and the Western; and the variety of Western Europe may be said to be of one style in North Italy, of another in Southern Gaul, of another in Normandy and England, etc.* (p. 7). On the following pages, after alluding to churches of Northern Italy, the references made to the processes of Romanesque as distinguished from Roman builders (pp. 9, 11, 12, 15) are not limited by any terms "Northwestern" or even "Western," and your assertion on p. 12 to which I alluded in my review is as follows: *A beginning was made in the direction of further progress when the Romanesque builders began to vault their naves.* The very ascription to the whole Romanesque style of peculiarities confined mainly to Normandy argued the imperfect acquaintance with Romanesque as a whole to which I alluded. In fact, in your book, among all the main pro-

¹ *Viollet-le-Duc, ses travaux d'art et son système archéologique*, pp. 154-78.

² The reference to "North-Western Europe" on p. 16 appears to apply merely to oblong compartments, as is shown by Note 1. As French Romanesque was mainly developed in the centre and south, it is out of the question to omit these regions. It was not north of the Loire (p. 28), but south of it, that the new style of architecture was in process of development.

vincial schools in France only that of Normandy is studied: those of equal importance in the east, centre, and south of France (as, for example, the schools of Burgundy, Poitou, Perigord, Auvergne, the Loire, etc.) are hardly alluded to, and no buildings belonging to them are studied. It seems to me that to this omission is due your error in holding to the prevalence of wooden roofs. Everyone knows that the early Norman churches had wooden roofs and were not vaulted until later, and that it was in this very respect that they differed from the buildings south of the Loire, which were primitively vaulted. It is useless, therefore, to cite a list of monuments with wooden roofs in Normandy and the north (which might, by consulting Dehio and Bezold, be made many times as long); for this is not disputed. For the same reasons the opinions of Ruprich-Robert and Quicherat which you quote, applying only to Norman architecture, do not affect the question. To say (p. 12) that the *twelfth century vaults of the Abbaye-aux-Hommes at Caen are among the earliest that were constructed over a nave*, and to speak of a time in the late Romanesque period when *the Romanesque builders began to vault their naves*, appeared to me to argue two things: first, a misapprehension of the fundamental character of Romanesque, which is essentially a vaulted style from its very beginnings; second, an unfamiliarity with the monuments of Central and Southern France which still have vaulted naves of the eleventh century, and a lack of acquaintance with such proofs as Quicherat has brought forward, in abundance,² to show that it was the adoption of the vault in the first decade of the eleventh century which produced the change from the late Latin to what we term the Romanesque style. The churches of the eleventh century which we find to have had a nave covered with a wooden roof are merely survivals or reversals due to two causes: conservatism and the ill-success, through imperfect knowledge of the laws of statics, of many of the earlier attempts at vaulting. But when, even in these early cases, the wooden roof is preserved, we find the new proportions and other elements brought in by the vaulting system to be present in them also. I may therefore safely assert that it was not (as you say it was) the common practice of the Romanesque builders of Western Europe to cover the nave with a timber roof only, and that such an opinion is contrary to the very character of Romanesque architecture, which is as essentially a vaulted style as is the Gothic.

III. With reference to my contention, that the term Gothic should be allowed, for example, to some of the churches of Spain and England, your reply is, that you decline to call them Gothic only when they fail to exhibit a Gothic system. Now, there can be no *when*, because in your

²QUICHERAT, *Mémoires*; *Arch. du Moyen Age*, p. 114, seq.

very preface (p. vi) we read that Gothic architecture was *never practised elsewhere than in France*. This is a geographical limitation. On p. 198, when it is recognized that such buildings as Burgos, Toledo, and Leon are Gothic in the main, the only variation from the developed French type which can be found is the smaller size of the windows; a variation which has no effect whatever upon the purely Gothic constructional principles, and is a matter of suitability, being caused merely by the more southern climate, as you have allowed. Spanish architecture has therefore a perfect right to be called Gothic even on your own showing. In regard to the wall-spaces left in early French-Gothic buildings, I can only repeat, that when you find the same in buildings outside of France you appear to refuse to call them Gothic: the result is that we are asked to consider two buildings essentially alike to belong to two different styles, one Gothic the other "pointed," when there is no structural difference of any importance between them.

IV. *Italian Architecture*. While acknowledging the inaccuracy of your statement, that apsidal aisles and flying buttresses were never used in Italy, you maintain the correctness of your assertion, that the cathedrals of Siena and Orvieto *differ little from other vaulted pointed buildings in Italy*. Now, in both these churches the structural arches are not pointed but round, only such secondary forms as windows being pointed; and you yourself tell us (p. 7) that "pointed arches in apertures do not much differ structurally from round ones:" this shows the inconvenience of substituting the term "pointed" for Gothic. Orvieto has a wooden roof to its nave and structural round arches: there are not in it any structural pointed elements whatever. Siena is certainly vaulted, but the vaults differ from those usually found in Tuscan and Northern churches in being flatter and more oblong. In both buildings, the effect is made quite different by the closeness, greater length, and slenderness of the piers and columns, a point in which they more nearly approach the basilical Romanesque churches of Tuscany. There is more reason to call the churches of Sicily pointed than to give this name to the cathedral of Orvieto. In fact these two churches, while having hardly anything in common, differ in almost every way from the pointed monastic churches with which you compare them, and these differences affect the vaulting, supports, forms, and proportions.

I can add an interesting instance of the early use of the flying-buttress in Italy. It is in the brick church of Sta. Maria di Castagnola, near Jesi, of Franco-North-Italian extraction and Cistercian parentage, built between 1172 and 1196.*

* The flying-buttress is certainly used near the transept: the rest of the buttresses rise considerably above the roof of the aisles, but it is difficult to ascertain whether they were originally solid as they now are.

The point of special importance, however, is the general statement (p. 181) which forms the starting-point of your study, namely, that the pointed church of S. Andrea at Vercelli built in 1219 is an exceptional instance, and, that pointed design did not begin to spread in Italy until about 1250. In answer to my former criticism, you suggest that, like S. Andrea at Vercelli, the early churches I refer to were the work of foreign architects, and assume them to be Cistercian constructions. I am asked to prove that native Italian architects adopted pointed forms before the middle of the thirteenth century. This I will do by printing here a list of over sixty transitional and pointed churches and monastic buildings built in Italy between 1170 and 1250, most of which were erected not by French Cistercian monks but by native architects. To many of these I have given personal study. Some, like Fossanova, S. Martino al Cimino at Viterbo, S. Leo on the borders of Umbria and the Marches, and perhaps S. Maria d'Arbona near Chieti, appear to be by French architects. This leaves an overwhelming majority by the hand of native Italians who at times (as at Casamari and San Galgano) exactly followed French models, at other times (as at Sezze, Ferentino, and Viterbo) introduced considerable novelties. As time went on, these divergences became greater, as can be seen in the buildings erected between 1220 and 1250. Each large Cistercian monastery exercised the strongest influence in favor of the spread of pointed forms over a considerable radius, so that we find cathedrals and parish-churches, and even secular buildings, built in this style as early as the first years of the thirteenth century. The early school of the North was not so closely connected with the Cistercians, and greater independence was shown. By 1225, the pointed style had spread over a large part of Central and Southern Italy, and, when the two new monastic orders then adopted it, they found it no great novelty. A considerable list could be given of pointed buildings of both Franciscan and Dominican orders erected in the Papal States before 1250. It is my intention to illustrate in detail in my series of papers on *The Introduction of Gothic Architecture into Italy* the greater part of the monuments enumerated in the following list. The inevitable conclusion is, that the pointed style was known in Italy, within certain circles of Cistercian and other French influence, between c. 1175 and 1220; and that it was then carried over a large part of Italy between 1220 and 1250 by the Dominican and Franciscan orders, who adopted it from the Cistercians. I am therefore able to antedate your period for the spread of pointed forms by at least a half-century, and, by proving that the architects of most of such churches were Italians and not foreigners, I am enabled to answer in the affirmative your query: *Did the Italian people, at this time, show any disposition to adopt pointed forms in their own architecture before the middle of the thirteenth century?*

EXAMPLES OF POINTED ARCHITECTURE IN ITALY
FROM ABOUT 1170 TO 1250.¹

Northern group.

1. 1185. *Alessandria*: S. Maria del Carmine.⁶
2. 1189-1215. *Vezolano*: S. Maria.⁷
3. c. 1215. *Asti*: Cathedral.⁸
4. c. 1230. *Asti*: S. Secondo.⁹
5. 1227. *Milano*: S. Eustorgio.¹⁰
6. 1228. *Milano*: Palazzo Pubblico.¹¹
7. 1215. *Como*: Broletto.¹²
8. 1217. *Bologna*: S. Martino dell' Aposa.¹³
9. c. 1220-30. *Bologna*: S. Maria della Misericordia.¹⁴
10. c. 1221-30. *Bologna*: S. Domenico.¹⁵
11. 1226. *Bologna*: Palazzo del Podestà.¹⁶
12. 1231-86. *Bologna*: S. Giovanni in Monte.¹⁷
13. 1236-45. *Bologna*: S. Francesco.¹⁸

¹ In this list are included a number of monuments which are only in part pointed; several of whose pointed character I am not quite certain (such are numbers 2, 15, 32, 56), and a few that are now destroyed or remodelled. With two or three exceptions I am personally acquainted with all those that belong to the Middle group, and with, perhaps, one-half of the Northern and Southern groups, and have as evidence my photographs and notes. For the rest I have relied on descriptions or drawings. Some buildings that may appear of but slight individual importance have been included as showing the spread of the style. The list could have been swelled by many doubtful examples. From it have been excluded some Franciscan, Dominican, and other buildings whose date is unknown, though their style is early. It does not include any of the pointed buildings of Sicily and Southern Italy that arose under Oriental influence; nor those, like the Cistercian church of Valvisciolo (c. 1151), which are in the same plain pointed style as the French buildings of Perigord. I give these numerous references to MÖTHES more for the purpose of verification than because his descriptions are at all adequate.

⁶ MÖTHES, *Die Baukunst des Mittelalters in Italien*: Jena, 1884, 443.

⁷ MÖTHES, *ibid.*: SCHNAAASE, VII, 105; RICCI, *Storia dell'architettura in Italia*, II, 191; REBER, *History of Medieval Art*, 566.

⁸ MÖTHES, 447, *seq.* Cf. CHAPUY, *Le Moyen Age monumental*; OSTEN, *Les Monum. de la Lombardie*, pls. XVII, XVIII.

⁹ MÖTHES, 448.

¹⁰ MÖTHES, 450; CAFFI, *Descrizione*.

¹¹ STREET, *Brick and Marble architecture in North Italy*, p. 329, fig. 59; MÖTHES, 453, fig. 131; RICCI, II, 196.

¹² MÖTHES, 453-4; STREET, 340, fig. 63.

¹³ MÖTHES, 457; RICCI, II, 279, 317.

¹⁴ MÖTHES, 456-7; ORSLEY, *Christian Architecture in Italy*, pl. 1, 5.

¹⁵ MÖTHES, 458-9; THODE, *Frauen von Assisi*, 1885, 334.

¹⁶ MÖTHES, 456; RICCI, II, 140.

¹⁷ MÖTHES, 456; RICCI, II, 137. ¹⁸ THODE, 331-4; Photographs; MÖTHES, 457.

14. 1219-24. *Vercelli*: S. Andrea.
15. 1180-1200. *Genova*: S. Giovanni di Prè.¹⁹
16. 1226-30. *Parma*: S. Francesco del Prato.²⁰
17. c. 1240. *Piacenza*: S. Francesco.²¹
18. c. 1240. *Piacenza*: S. Giovanni di Canale.²²
19. 1223-54. *Brescia*: Broletto.²³
20. 1232-1350. *Padova*: S. Antonio.

Middle Group.

21. 1170-80. *Fondi*: Cathedral.²⁴
22. 1172-96. *Jesi* (near): S. Maria di Castagnola.²⁵
23. 1173. *S. Leo*: Cathedral.²⁶
24. c. 1178-1215. *Fossanova*: Monastery.²⁷
25. } *Piperno*: Communal Palace.²⁸
26. } *Sezze*: Cathedral.²⁹
27. } c. 1200. *Sermoneta*: Cathedral.³⁰
28. } *Sermoneta*: S. Michele.³¹
29. } *Sermoneta*: S. Nicola.³²
30. c. 1190-96. *Ceccano*: S. Maria de Flumine.³³
31. 1151-1217. *Casamari*: Monastery.³⁴
32. c. 1200. *Ponticelli*: S. Maria di Colle.³⁵
33. 1200-1250. *Ferentino*: S. Maria.³⁶
34. 1207. *Spoletto*: Cathedral (façade).³⁷
35. c. 1200-25. *Anagni*: Cathedral (rear).³⁸
36. c. 1207-25. *Viterbo*: S. Martino al Cimino.³⁹

¹⁹ Mothes, 654-5.

²⁰ Mothes, 455.

²¹ Mothes, 742.

²² Mothes, 742. ²³ Mothes, 444, 450. ²⁴ Schulz, II, 132; Mothes, 683-4.

²⁵ Mothes, 449; my Photographs and Notes; Schnaase, VII, 87; Agincourt, *Hist. de l'Art*, pl. xxxvi, xlii, etc.; Dehio and Bezold, *Die kirchliche Baukunst des Abendlandes*, pl. cxcvi, 5, 6.

²⁶ Agincourt, pl. xxxvi, 20, 21; Schnaase, VII, 87; Mothes, 441, etc.

²⁷ My article in *Journal*, VI, 10-46.

²⁸⁻³² My Photographs and Notes. Cf., also, for some of these buildings, Mothes, *op. cit.*, *passim*.

³³ My Notes and Photographs.

³⁴ L. de Pershis, *La Badia o trappa di Casamari*; Illustrations in Okely, *Christian Architecture in Italy*, pl. III, 2; and in Dehio and Bezold, pl. cxlvi, 3; References in Ricci, Mothes, Schnaase, etc.; my Photographs and an unpublished Article written for the *Journal*.

³⁵ Ricci, II, 38.

³⁶ Mothes, 689; *La Mostra della Città di Roma*, etc., x; my Photographs and Notes.

³⁷ Alinari's photograph; Ricci and Mothes, etc.

³⁸ Photographs by Alinari.

³⁹ My article in *Journal*, vol. VI, 299.

37. 1209. *Chieti* (near): S. Maria d'Arbona.⁴⁰
 38. 1201-48. *Siena* (near): Monastery of S. Galgano.⁴¹
 39. *Roma*: Church at Capo di Bove.⁴²
 40. c. 1227. *Teramo*: S. Francesco.⁴³
 41. 1230. *Ascoli*: Porta di Solesta.⁴⁴
 42. 1230. *Corneto*: S. Francesco.⁴⁵
 43. *Corneto*: S. Panerazio.⁴⁶
 44. 1221-44. *Viterbo*: S. Maria ai Gradi.⁴⁷
 45. 1230-40. *Viterbo*: S. Francesco.⁴⁸
 46. c. 1220-40. *Subiaco*: Monastery (details).⁴⁹
 47. *Perugia*: S. Francesco.⁵⁰
 48. c. 1240. *Perugia*: S. Giuliana.⁵¹
 49. c. 1220. *Perugia* (near): S. Salvatore di Monte l'Abate.⁵²
 50. 1230. *Cortona*: S. Francesco.⁵³
 51. 1230-40. *Orvieto*: S. Francesco.⁵⁴
 52. c. 1225. *Siena*: S. Domenico.⁵⁵
 53. *Sutri*: S. Francesco.⁵⁶
 54. 1234. *Spoletto*: S. Paolo.⁵⁷
 55. 1235. *Spoletto*: S. Tommaso.⁵⁸
 56. bef. 1250. *Pietramala*: S. Domenico.⁵⁹

Southern Group.

57. 1209-53. *Rapolla*: Cathedral.⁶⁰
 58. c. 1200. *San Leonardo*: Church.⁶¹
 59. c. 1188-1214. *Pontone*: S. Eustacchio.⁶²

⁴⁰ Mothes, p. 697; Derio and Bezold, pl. cxcvi, 2; my Photographs and Notes.

⁴¹ Photographs by Lombardi. Cf. L. de Persius, *op. cit.*, for date.

⁴² Mothes, 696-7; Agincourt, xxxvi, 18, 19; xlii, 14-17.

⁴³ Schulz, II, 12; Mothes, 701; Pannella, *Guida illustrata di Teramo*.

⁴⁴ Mothes, 701; Schulz, II, 7. ⁴⁵ Mothes, 669, 701. ⁴⁶ Mothes, 683, 710.

⁴⁷ Cristofori, *Le tombe dei Papi in Viterbo e le chiese di S. Maria in Gradi, di S. Francesco, e di S. Lorenzo*, 1887, p. 62 and *passim*.

⁴⁸ Mothes, 719; Cristofori, p. 149 and *passim*.

⁴⁹ L. degli Abbati, *Da Roma a Solmona*, 29; Photographs; Agincourt, *passim*.

⁵⁰ Guardabassi, *Indice-guida dei monumenti dell' Umbria*, 175.

⁵¹ Guardabassi, p. 233; Photographs and Notes. ⁵² Notes and Photographs.

⁵³ Ricci, II, 58. ⁵⁴ Piccolomini Adami, *Guida di Orvieto*, 144; my Notes.

⁵⁵ Mothes, 759; Romagnoli, *Censur storico-artistici di Siena*, 53. ⁵⁶ My Notes.

⁵⁷ Mothes, 701; Guardabassi, 301. ⁵⁸ Mothes, 701. ⁵⁹ Ricci, II, 48.

⁶⁰ Lenoir, *Gazette Archéologique*, 1883, 29; Mothes, 626; Schulz, *Kunst d. Mittel. in Unteritalien*, I, 332.

⁶¹ Schulz, I, 213.

⁶² Schulz, II, 264. This may have a pointed style of Oriental origin.

60. c. 1200-25. *Napoli*: old Cathedral.⁶⁵
61. 1230. *Celano*: Castle.⁶⁶
62. 1227. *Lanciano*: S. Maria Maggiore.⁶⁷
63. 1230. *Brindisi*: S. Lucia.⁶⁸
64. 1241. *Solmona*: S. Maria della Tomba.⁶⁷
65. 1240. *Trani*: Frederick's Castle.⁶⁹
66. *Andria*: Castel del Monte.⁶⁹
67. 1225-56. *Celano*: S. Francesco.⁷⁰

A careful study of this list of buildings will disclose the existence of several centres of early Italian pointed architecture. The two earliest are in the far north; in Piedmont, where we find the churches of Vezzolano, Alessandria, Vercelli, and Asti, erected between 1185 and 1230; thence the style spread to Lombardy (Como, Milano, Brescia). A second school, which soon became contiguous to that flourishing in Lombardy, seems to have been founded at Bologna toward 1220, and to have spread thence to Parma, Piacenza, and other cities. This school united elements from the north with those from the more southern school which had long been established. This third school (whose centre was in the Papal states) began in about 1175, and included not only such monastic establishments as Fossanova, Casamari, San Martino, and Chiaravalle d'Jesi, but also such cathedrals as Fondi and Piperno. By means of Cistercian colonies, its influence extended as far south as Sicily, and northward into Tuscany and throughout Umbria until it met the school of Bologna. Thus a network of buildings was spread through every province of Italy, and these buildings were civil and civic as well as ecclesiastical and monastic. They can be grouped in schools, either monastic, or geographic, or combining both elements.

There remains but one point to be noticed in connection with pointed Italian architecture, and that is the statement (p. 193), that, with few exceptions, it did not extend far south of Naples. It will be necessary only to examine Schulz's work (*Kunst des Mittelalters in Unteritalien*) to find a fair number of pointed buildings farther south, including Sicily.

I believe that the above answers all the points raised in your letter, and will be found to establish the correctness of the remarks in my review of your book.

A. L. FROTHINGHAM, JR.

⁶⁵ Mothes, 626.

⁶⁶ L. DEGLI ABBATI, *Da Roma a Solmona*, 143-4; Mothes, 637; Schulz, II, 85.

⁶⁷ Schulz, II, 51; Mothes, 638.

⁶⁸ Mothes, 637.

⁶⁹ L. DEGLI ABBATI, 175; Schulz, II, 61.

⁷⁰ Mothes, 637-8; Schnaase, VII, 540.

⁷¹ Schnaase, VII, 540.

⁷² L. DEGLI ABBATI, 145; Mothes, 637.

ODYSSEUS' FEAT OF ARCHERY.

Editor of American Journal of Archaeology.

Sir :—In the last number of your journal (vol. VI, p. 359), an allusion is made to the explanation offered by Berger (*Berl. phil. Wochenschrift*, p. 714), in regard to the possibility of Odysseus' feat of archery, based upon the discovery in the tomb at Vaphio of a bronze axe-head, having its blade pierced with two openings. This is figured in the *Ἐφημερίς Ἀρχαιολογική*, 1889, pl. 8, from which it is copied into *L'Anthropologie*, vol. I, p. 554. In form it is quite similar to the Egyptian battle-axes, described and figured by Wilkinson, *Ancient Egyptians*, vol. I, p. 362, pl. 319, figs. 1-6. There is no physical impossibility for an arrow to be shot through twelve such axe-heads, ranged in a row. In fact, this is the explanation offered by Bothe, in his note to *Odys.* XIX, 572, based upon a conjecture of Count Caylus, from whose *Tableaux tirés d'Homère et de Virgile* is copied a figure of an axe-head pierced with a hole, representing his idea of what was the *πέλεκυς* of Homer.

But to this explanation, as well as to that of Berger, your remark is applicable, that "the main difficulty is in the fact that the Homeric text, of [*Odys.*, XXI] 422, seems to indicate a hole, not in the blade, but in the handle." I do not so understand the passage referred to, but think that *σσελαή* there means the *hole* into which the *σσελαῖον*, the *helve* of the axe, is inserted; as in the description of the one which Kalypso gave to Odysseus (*Odys.*, v. 236): "a great axe of bronze, sharp on both sides, and in it a beautiful helve, made of olive-wood, well fitted." Two axe-heads of this shape were discovered by Schliemann at Mykenai, which are figured on p. 111 of his work; four were found at Hissarlik (*Ilios*, p. 606), and one at Tiryns (p. 168). I think it was through the helve-holes of twelve axes of this form, ranged in a line, that Odysseus shot his shaft; and this is also the opinion of Dr. John Evans, who has in his collection three such axes, found in Greece (*Ancient Bronze Implements of Great Britain*, p. 161).

HENRY W. HAYNES.

Boston, Jan. 1, 1891.

REVIEWS AND NOTICES OF BOOKS.

V. BINDI. *Monumenti storici ed artistici degli Abruzzi*. 225 plates in fol., Text, 8vo, pp. xxxvi, 966. Naples, 1889; Giannini. 200 francs.

The importance of the monuments illustrated by the phototype plates of the album is not by any means approached by the quality of the text. The province of the Abruzzi is one of the richest in mediæval monuments in Italy and had been known thus far mainly from Schulz's work *Die Kunst des Mittelalters in Unteritalien*, which contains considerable, but very abbreviated, descriptive matter and little illustration for this part of Southern Italy. The Abruzzi is especially notable for its monuments of the XII, XIII, and XIV centuries, and, although the influence of the South is predominant, that of the neighboring Roman province is often noticeable, here and there, even as far as the Adriatic coast, where, at Teramo, a Roman artist erected the porch of the cathedral. A work on the plan of this by Bindi is much needed and there is still room for it, because, though he has made for some years a specialty of this province and has published several preliminary works, his method is unscientific and he lacks the most essential qualification for the work—a knowledge of the general history of mediæval art. He approaches as near to an antiquarian of the old type as a dilettante can. Still, his work is a vast encyclopedia of documents and information, to be used with caution, and his plates will be of great use to more scientific students. We only wish to warn students to place no confidence in his transcripts of inscriptions. They are to the last degree inaccurate.—A. L. FROTHINGHAM, JR.

C. A. DE CARA. *Gli Hyksôs*. Roma; i Lincei.

Dr. de Cara has devoted a sumptuous volume to one of the most interesting but most obscure periods in ancient history, that of the rule of the Hyksôs, or shepherd-kings, in Egypt. For more than five hundred years Northern Egypt was ruled by strangers who had conquered the country, but after a time had themselves been conquered by the culture and spirit of the Egyptian race. Nevertheless, they never became amalgamated with that race. Their rule was borne with sullen hatred; and, at last, a long and obstinate war broke out between them and the native princes of Thebes, which ended in the expulsion of the foreigner, the rise of the XVIII dynasty, and the prosecution of a war of vengeance in that Asia from which the Hyksôs invaders had originally come.

Dr. de Cara, in his elaborate book, puts together all that is ascertained in regard to the Hyksôs, criticises the theories that have been propounded on their behalf, and suggests a theory of his own. Nothing that has been published on the subject seems to have escaped his notice. His learning is catholic; and he quotes French and English as well as German authors. His own view is that the Hyksôs represented a confederacy of various Asiatic tribes under the leadership of the northern Syrians. That their ruling class came from this part of the world seems clear from the name of their supreme god Sutekh, who occupied among them the position of the Shemitic Baal. Not only was Sutekh the name of the Hittite god, as we learn from the monuments of Ramses II, but one of the cities of Northern Syria commemorated by Thothmes III, at Karnak, was Sathekhbeg, in which Mr. Tomkins is plainly right in seeing the name of Sutekh. It is only strange that the name is not found in the Old Testament or in a Phœnician inscription. Dr. de Cara, who identifies the Hyksôs stronghold Avaris with Pelusium, connects the name of the latter with the Shemitic word which has given us the name of the Falashas in Ethiopia, and perhaps of the Philistines in Asia. It would mean the town of the "wanderers." The etymology is ingenious, and is supported by the Egyptian equivalent of Pelusium. It may be that it will yet be verified when the ancient "key of Egypt" has been subjected to the spade of the excavator.—A. H. SAYCE, in *Academy*, Sept. 20.

CH. DIEHL. *Excursions Archéologiques en Grèce*. 12mo, pp. x, 388. Paris, 1890; Armand, Colin et Cie.

This little volume, by an old member of the French Schools at Rome and Athens, who is now in charge of the course of archæology at the University at Nancy, makes no pretension to erudite research. It is not a record of M. Diehl's own travels, but a popular compendium of recent scientific exploration and excavation in Greece. He conducts the reader through Mykenai, Tiryns, Dodona, Athens, Delos, Olympia, Eleusis, Epidauros, Tanagra and the temple of Apollon Ptoios. This is an interesting and fruitful method of approaching the subject, as it throws light upon many different phases of Greek life, both early and late, and brings the reader into contact with the results of the most recent research. The bibliographical references at the beginning of each chapter are most useful. In French handbooks for popular use one frequently finds a disregard of German work. Not so in the present volume. German and modern Greek sources of information are freely utilized. The style is not sufficiently attractive to hold securely the reader's attention, nor is the book sufficiently systematic for use as a text-book. It is directed rather to the

general reader who wishes an archæological excursion amongst the sites which have been recently excavated in Greece.—A. M.

JACOB ESCHER. *Triton und seine Bekämpfung durch Herakles*. 8vo, pp. 139. Leipzig, 1890.

The struggle of Herakles and Triton is figured upon the Assos frieze, upon a bronze relief from Olympia, upon an island-stone in the British Museum, upon many black-figured vases, and upon the recently discovered *poros* sculptures from the acropolis at Athens. We might expect that a subject so popular in ancient art would have figured frequently in literature. This, however, is not the case, and for an understanding of this subject we are forced to a study of Triton in general. Accordingly, Mr. Escher considers the derivation of the name; the significance of Tritogeneia as applied to Athens; the functions of the gods related to Triton; the relation of Athena to Triton in Greek mythology; the genealogy of Triton; the provenance of Triton; the Byzantine Halios Geron; the Libyan Triton; the transformation of Triton; the struggle of Herakles and Triton; Triton, Nereus, and the Hesperidai; and, finally, the form of Triton and the figured representations of the conflict. The name seems to be derived from the Vedic Trita, who appears as a god of war, as well as god of the waters. This not only furnishes an ancestral ground for the early Greek Triton, but explains Tritogeneia as an epithet of the warlike Athena, who, in the earliest Greek mythology, was probably the daughter of Triton. Triton seems to be primarily a god of flowing water, and then of the sea. His contest with Herakles may be localized in three places, (1) at Pheneos in Arkadia, (2) on the banks of the Bosphoros, and (3) on the coast of Africa. The first of these records the earliest version of the story, while its transference to the deserts of Africa may be regarded as the latest phase. By the end of the sixth century the myth is dead and becomes enshrined in the monuments of the early fifth century.—A. M.

A. E. HAIGH. *The Attic Theatre*. A description of the stage and theatre of the Athenians, and of the dramatic performances at Athens. 8vo, pp. XIII, 341. Oxford, 1889.

This work is a credit to English classical scholarship. Deeply sensible of the fact that, in spite of the accumulation of new material furnished by inscriptions and excavations, no comprehensive work on this subject had appeared in the English language, during the last fifty years, Mr. Haigh has gone to work in a conscientious and thorough manner to supply the deficiency. The result is a scholarly treatise written in a clear and attractive style and exhibiting a fine, discriminating spirit in the

handling of all the evidence at his command. After reading the volume we feel sure that the author has not only read with care his German authorities, but has filled himself with the spirit of Attic dramatic literature, which has enabled him to treat his theme not in a dry and external manner, but with genuine sympathy. It is this which gives to his book a charm which German treatises usually lack. His treatment of his subject is nevertheless thoroughly systematic. After discussing the general characteristics of the Attic drama and describing its various forms, he treats of the production of a play, of the poets, the *choregoi* and actors, and of the training and expenses of the chorus; then of the theatre, of the old wooden theatres at Athens, and in detail of the theatre of Dionysos; then of the scenery and all the mechanical contrivances and stage properties; then of the actors, of the rise of the actor's profession, of the costume of tragic, satyric, and comic actors, and of the style of Greek acting; then of the chorus, its history, size, arrangement, of the dancing and music; and finally of the audience, its composition, the price of admission, the distribution of the seats, and the various arrangements in connection with the audience. There are comparatively few illustrations, but where they do appear they are well chosen.—A. M.

BARCLAY V. HEAD. *Catalogue of Greek Coins. Corinth, Colonies of Corinth, &c.* Edited by Reginald Stuart Poole. 8vo, pp. LXVIII, 174; pls. XXXIX. London, 1889.

This volume of the catalogue of coins in the British Museum comprises not only the coins of Corinth, but also those of a similar character chiefly from Corinthian colonies in Southern Italy, Sicily and Western Greece. The earliest Corinthian coins of the flat fabric are assigned to the age of Kypselos, 657-625 B. C., which places the coinage of money at Corinth soon after that of Aigina and before that of Athens. The earliest Corinthian coins, in fact, show the Aiginetan incuse, but this is soon replaced by the "swastika." We can assent to Mr. Head's proposition that "the so-called 'swastika' pattern is merely a survival of the early geometrical meander pattern which is characteristic of the earliest Greek vases," without going so far as to assert, with him, that the rosette which replaces it was "probably developed out of it." The origin of the rosette has been more satisfactorily explained by Mr. Goodyear, *AJA*, 1887, p. 289. Corinthian coins of various periods are clearly illustrated and carefully described; then follows the series with initials of magistrates and symbols. Considerable attention is also given to the Roman series of bronze coins bearing the names of the *Duoviri* or annual magistrates. Less is said of the types of Corinthian coins in the Imperial period, since they have been so fully discussed by Professor Gardner in his *Numismatic Commentary on*

Pausanias. The geographic and chronologic classification of the quasi-Corinthian coinages of Italy, Sicily and Western Greece is based on the lines laid down by Dr. F. Imhoof-Blumer in his paper *Die Münzen Akarnaniens* in the *Numismatische Zeitschrift*, x, 1878. In addition to the historic introduction and to the description of the coins, the volume contains a series of indexes, (1) geographical, (2) types, (3) remarkable symbols, (4) names of magistrates and of remarkable inscriptions.—A. M.

W. C. LEFROY. *The Ruined Abbeys of Yorkshire.* 12mo, pp. xvi, 296. New Edition; Seeley, London, and Macmillan, New York, 1891.

The author has resisted, to a certain extent, the temptation to treat his picturesque subject merely from a poetic point of view, and, in his descriptions, he makes use both of his own architectural notes and of some special monographs. Still we must dismiss any idea that we have here a scientific or historic essay on the abbeys of Yorkshire, for the text is arranged for pleasant reading with an easy mixture of historic reminiscence and descriptions that never become detailed from the standpoint of the architectural student. Of the monasteries written about, that of St. Mary, York, belonged to the regular Benedictines; those of Rievaulx, Byland, Fountains, Kirkstall, Roche, and Jervaulx to the Cistercian Order; Mt. Grace Priory to the Carthusians; St. Agatha and Eggleston were houses of the Premonstratensian Canons; Bolton, Guisborough, and Kirkham were priories of the Canons of Saint Augustine; finally, Whitby belonged to the unreformed Benedictines. Some of these names are famous in English history. The Cistercian abbeys of Fountains, Byland, and Kirkstall have long been cited as the principal examples of early pointed architecture in England preceding the work at Canterbury. Here, as elsewhere, the French Cistercians and their native pupils were the pioneers of the Gothic. For a glimpse at their history, for their general plan, for sketches of certain details, this book will satisfy all but a specialist; though it would be more useful if more frequent mention had been made of the detailed monographs by which so many of these monuments have been illustrated. The student of architecture will miss any thorough examination of the character of these constructions of the XII and XIII centuries, the origin of their style and its influence upon that of the cathedral churches. But, as an introduction to a serious study of these buildings, the book will serve a good purpose even to a scholar, though it is especially adapted to the general reader.—A. L. F., JR.

EDUARDUS LOCH. *De titulis Graecis Sepulcralibus.* 8vo, pp. 64. 1890.

This inaugural dissertation of a pupil of Professor Gustav Hirschfeld is the first part of a comprehensive work on Greek epitaphs. The writer

does not occupy himself with the late texts which contain penal clauses against desecrators of the tombs, such as have been treated by Vidal-Lablache in 1871 and by Prof. Hirschfeld himself in 1888. He treats of the archaic epitaphs; those of the fifth century; Attic epitaphs; the formulas of Attic epitaphs that are found throughout Greece. Although his remarks on the subject of the reliefs that decorate sepulchral Attic stelae are insufficient, the strictly epigraphic chapters are full and conscientious, as well as evincing a good method.—S. REINACH, in *Revue Critique*, 1890, No. 28.

J. L. PETIT. *Architectural Studies in France*. New Edition, revised by Edward Bell. London; Bell.

In this improved edition of these *Architectural Studies*, first published, in folio, in 1854, the drawings are in some instances reduced in size; but the author's rough and rapid, yet accurate and truthful, sketches thus acquire a certain softness without losing any of their characteristic vigor. The present volume gives full proof of Mr. Petit's mastery of the principles and details of church architecture. He visited only portions of the country. His sketches comprise Normandy, but not Brittany; Paris and its neighborhood, but not the north, or French Flanders; the churches of Anjou, Poitou, and Perigord, but a few only of those of Auvergne and Guienne; the southeast, Burgundy, and Lorraine are hardly touched. He is no fanatic of the Gothic and of the Gothic only. His peculiar preference seems to be given to the cruciform, central-turreted, Angevin church, where the Romanesque passes into the Gothic.

Mr. Petit does not perfectly distinguish between the debased Roman and the Romanesque. Still, he mentions some of the marks which we should regard as characteristic of the earlier work; for instance, the use of brick and tile in the construction, in layers with stone-work, but especially among the voussoirs or stones of the arch; sometimes a peculiarly hard cement or mortar replaces these tiles—a cement used not only to bind the stone-work, but as a real factor in the construction, so hard that it often stands out with sharp edges where the stone has completely worn away.

He recognizes Roman work in the south of France, such as the Palais Gallien at Bordeaux, as the type or model of some of the principal churches of the eleventh or twelfth century. This continued imitation of Roman work is still more apparent in some of the castles and bridges.

The geometrical formulae, the numerous and careful outlines of mouldings, show how completely Mr. Petit entered into and mastered his subject. The additional notes of Mr. Bell are few, but all are valuable. This edition, besides being more convenient, is a real improvement on the former one.—W. WEBSTER, in *Academy*, Dec. 13.

W. M. FLINDERS PETRIE. *Kahun, Gurob, and Hawara*. Chapters by F. Ll. Griffith and P. E. Newberry. London; Kegan Paul and Co.

The tremendous task of opening the pyramid of Amenemhat III at Hawara was begun by Mr. Petrie in January, 1888; and, after tunnelling his way to the heart of the mass, he had just reached the stone roof of the sepulchral chamber when he was compelled by the overwhelming heat of the Egyptian summer to defer the completion of his work till the following season. As the stone-casing is all destroyed, and the bulk of the pyramid consists entirely of sun-dried bricks bedded in loose sand, the work of tunnelling proved to be neither simple nor even devoid of peril. This delicate and dangerous task was performed by Mr. Petrie himself, step by step, at the rate of five feet per diem, from February 11, 1888, to the 5th of the following April. When the sepulchral chamber was at last discovered, it was found to consist of one gigantic hollowed-out block of sandstone, weighing about 110 tons, roofed by three enormous slabs of the same material. Above this was an upper chamber roofed in by longitudinal beams, supporting a third roof of pent-house form, which consisted of huge slanting beams of limestone, three deep, and weighing about 55 tons each. Mr. Petrie engaged masons from Cairo to attack the stone roofing, and, after 21 days of steady work, an opening was forced into the upper chamber. Here, in the floor, the opening to the entrance-passage was found; but the walls of the chamber, unlike those of the pyramids of Teta, Unas, and Pepi, were absolutely blank, and, had not some fragments of alabaster vases inscribed with the cartouches of Amenemhat III been found at the bottom of the water and mud with which the monolithic chamber was flooded, the fact that this pyramid had once contained the mummy of the builder of the Labyrinth could never have been proven.

But there is a second sarcophagus in this chamber, which has been very curiously contrived by the insertion of a head and a foot slab between the large sarcophagus and the east wall. Although this also was empty, there can be no doubt that it was made for a daughter of Amenemhat III, named Neferu-Ptah, whose magnificent table of offerings in sculptured alabaster, together with the fragments of eight or nine alabaster bowls, all inscribed for the "royal daughter Neferu-Ptah," were discovered in the "well-chamber" to the north of the sepulchral chamber. As Mr. Petrie points out, the making of this second sarcophagus was clearly an afterthought. It must have been put together after the pyramid was built, when no larger blocks could be brought in; yet before the final closing of the structure, which could not have taken place till the king died, and was himself buried there. Neferu-Ptah must, therefore, have pre-deceased her father. The king's sarcophagus must also have been carried up from without, and placed in position before the roof of the chamber was laid on, there

being no passage in this pyramid through which it could have been conveyed. How the huge monolithic chamber itself can have been lifted and lowered into the excavated rock in which it stands, and which forms the core of the pyramid, is one of those problems of ancient Egyptian engineering which no wall-paintings or papyri have yet enabled us to solve.

In pl. v, Mr. Petrie gives a remarkably accurate and elegant outline-drawing (to scale) of the before-named table of offerings, which consists of a rectangular oblong slab in fine alabaster (26½ inches in length by 17 in breadth and 9 in depth) sculptured in low relief with some 150 representations of food and drink offerings, such as cakes, lumps of meat, ducks, geese, vegetables, eggs, various kinds of wines, and the like, the whole surrounded by an exquisitely-cut dedication in hieroglyphic characters.

Mr. Petrie's discoveries last year at Tell Kahun and Tell Gurob, where he found the undisturbed ruins of two towns, one of the XII and the other of the XVIII and XIX dynasties, were fully described at the time, and were amply illustrated by the rich store of objects from both sites which he exhibited last autumn at Oxford Mansion. A large plan of Kahun (XII dynasty) is reproduced in pl. xv of the present volume; and it is most interesting to turn from this plan to Mr. Petrie's admirable chapter on *The Civilization of the XII dynasty*, and there to read exactly how the town was built, and what objects were found in the houses. These objects, again, are figured with Mr. Petrie's accustomed fidelity in pls. VIII to XVII. Here we once more see those curious dishes with rough incised patterns; those wooden hoes, and rakes, and grain-scoops; that curious brick-maker's mould; those plasterer's floats and carpenter's tools; and, most interesting of all, that primitive wooden sickle set with flint-saws, which were of such absorbing interest in Mr. Petrie's exhibition of 1889. Here, too, are reproduced the ivory castanets and the painted canvas mask from the House of the Dancer, together with the grotesque little wooden figure of that long-departed ballerina. No less interesting are Mr. Petrie's outline-plates (pl. XVI and pl. XVII) of flint and bronze tools, and (pl. XII and pl. XIII) of the numerous forms of cups, jars, pots, ring-stands, bowls, and other domestic vessels in pottery of that remote period. That so large a number of objects, many of them at that time of considerable value, should have been left in the houses when the town was deserted is very strange, and would seem to point to some sudden panic. The women, for instance, left not only their whorls and their spindles, of which a large number were found, but also a store of dyed wool, not yet spun; the net-makers left their netting-needles, their netting, and the balls of twine which were not yet made up; the weaver left his beam and the flat sticks with which he beat up his weft; and in the shop of a metal-caster were found, not only a fine bronze hatchet ready for sale, but his whole stock-in-trade in the shape of moulds for casting chisels, knives, and hatchets. Bronze mir-

rors, toilet objects, children's toys, draught-boxes, amulets, scarabaei, beads, rush-mats, baskets, brushes, and sandals, handbags made to draw with a cord, spoons, combs, and other personal possessions of these people were also found in their houses.

The most surprising, and perhaps destined to be the most important, part of Mr. Petrie's work as recorded in this volume is contained in his chapter on *The Foreigners*, wherein he gives an exhaustive and scrupulously minute account of the relics of that fair-haired and fair-skinned race which appears to have inhabited for about a hundred years the ancient town represented by Tell Gurob. The name of this town is lost; but there is evidence to show that it was founded during the reign of Thothmes III (xviii dynasty), and that it was practically abandoned about the time of Seti II (xix dynasty). The strangers would seem to have been colonists from Asia Minor, or possibly from the islands of the Aegean, as shown by the shapes, patterns, and glazes of their pottery; by the weights they had in use; by their un-Egyptian habits, their names, and the strange alphabetic signs scratched upon their potsherds. These signs, as well as an equally remarkable series of signs from the potsherds of Kahun, are reproduced in facsimile by Mr. Petrie in pls. xxvii and xxviii, the originals being now in the British Museum. It is undeniable, that they actually comprise a large number of Phœnician and Cypriote characters, and of those very archaic forms commonly known as Cadmean Greek, besides others which are identical with a large proportion of those of the Etruscan alphabet.

The exciting story of the finding of the mummy of Horuta, a high-priest of Neith, who was buried at Hawara in the time of the xxvi dynasty, and whose body was literally covered from head to foot with plates of gold, and costly amulets in gold, both solid and inlaid, of the finest and most exquisite workmanship, is given in the second chapter.

A large number of papyri, some fragmentary, some perfect, were found by Mr. Petrie in 1889, in the ruins of Kahun and Gurob, those in the former town being especially valuable, as but very few xii-dynasty papyri were heretofore known. Three of the most perfect of these earlier documents have been translated by Mr. F. Ll. Griffith.

Chap. vii, which concludes this volume, is written by Mr. Percy E. Newberry, and treats in a most interesting manner of the various flowers, fruits, seeds, vegetables, etc., found at Hawara and Kahun. A number of peas and beans, fragments of the leaves and stems of the cucumber, and two small radishes, were found in the ruins of the houses of Kahun, and are among the oldest vegetable remains which have yet been discovered in Egypt. The fruit-trees, which, from the abundance of their stones, appear to have been commonest, namely, the *heglig* and the *dellach* palm, are now no longer found in Egypt, the former being confined to

Abyssinia, and the latter to Nubia. So also with the *minuosa* Schimper, of which both the fruit and leaves have been found at Kahun, and which now only occurs in Central Africa and in Abyssinia.—AMELIA B. EDWARDS, in *Academy*, Nov. 1.

W. M. FLINDERS PETRIE. *Historical Scarabs*: a series of drawings from the principal collections. London; David Nutt.

Mr. Petrie's new volume, though of only 68 pages, contains the portraits of no less than 2,220 historical scarabs, admirably drawn in facsimile by the author. *To the outsider*, as Mr. Petrie says, *probably all styles look alike, as foreigners do to a stranger; but to an accustomed eye the specialties of each dynasty, and even of separate reigns, are very clear.* These specialties are various. Materials, glazes, colors, sizes, subjects, treatment, differ with the tastes and methods of the time; and all these factors have to be taken into the account when it is a question of either classifying a collection or determining the age of a specimen. Even royal scarabs are not necessarily dated to the reign of the king with whose name and titles they are engraved. There were such things as re-issues; and, without some knowledge of the phases of the scarab-maker's art from the III to the XXX dynasty, it is impossible to distinguish between a contemporary example and one of these later reproductions.

Scarab-art, like all the arts of ancient Egypt, had its decadences and renaissances. It was at its best under the Pharaohs of the XVIII dynasty; but it betrays no sign of archaism when we first make its acquaintance in the time of the very ancient kings of the III and IV dynasties. The scarabs of that remote period are actually better cut, made of finer pottery, and coated with a more imperishable glaze, than those of many a more recent epoch. At the same time, no art was more fluctuating. The scarabs of Khufu, of which Mr. Petrie gives eight examples, show a greater firmness and amplitude of style than those of the III-dynasty kings; while the scarabs of Khafra, his immediate successor, are inferior as regards both glaze and execution. With the VI dynasty, there comes an extraordinary change of style, beginning with Pepi Neferkara, sixth king of that line.

This change is apparently an archaistic revival of some very early school of which we at present know nothing. The cutting is coarse; the hieroglyphs are rude, yet feeble; the style is intentionally barbaric. *So Ra*, "son of Ra," as a royal title, now makes its first appearance in scarab-art; and the scroll, of which only two previous examples are noted, begins to assume importance as a border pattern. It is confined, however, to the sides, dividing the field of the scarab into three parts, the centre division containing the name and titles of the king. It is not till the time of the XII dynasty that we find the scroll carried round as a continuous ornament.

The archaism of the VI dynasty becomes yet more pronounced from the VII to the X dynasties, when the degradation of the hieroglyphic forms is greater than at any subsequent time. To this archaic period, which extends over six dynasties, belongs a class of scarabs fascinating to collectors, namely, "private scarabs" inscribed with the names and offices of private individuals. Of these Mr. Petrie gives about 120 examples.

Something of the broader style of the Khufu school reappears under the earlier Pharaohs of the XII dynasty, speedily followed by a reversion to the archaic fashion, which continues in favor with more or less modification till the beginning of the XVIII dynasty. With the advent of this great line of kings, scarab-cutting rises suddenly to the level of a fine art. Figure-subjects abound; and inscriptions, instead of containing only names and titles, record important historical events. The former series may be likened to gems, and the latter to medals. The king as a human-headed sphinx, now couchant, now passant, now trampling on a prostrate Asiatic; the king as a bull, typifying strength and valor; the king seated in the bark of Ra; the king crowned, sceptered and enthroned; the king on foot, grasping an enemy by the hair and about to deal the death-blow with his scimitar; the king in his chariot, driving over the fallen foe; the king as a mighty hunter, pursuing the antelope with bended bow or holding up the struggling lion by the tail—these, and such as these, are the favorite subjects of scarab-art in the time of the third Thothmes, and of the second and third Amenhotep. To the reign of Amenhotep III belong the yellow, violet, red, chocolate, and other brilliantly colored glazes which are found on the scarabs of no other period, and of which, by the way, there are some remarkable examples in the Abbott collection, now the property of the New York Historical Society. One large scarab (inscribed, if I remember rightly, with the marriage-text) struck me as unique, the glaze being of the peculiar and brilliant blue of the cornflower, and the hieroglyphs in white.

From the XVIII dynasty, scarab-art enters upon its long decadence, broken by occasional revivals, and finally expires with the last Pharaoh of the last native dynasty.

Mr. Petrie says (p. 9): *It is not usually known that all the brown scarabs (which are a majority) have originally been green-glazed; while all the white ones, excepting possibly some of Amenhotep III, have been originally blue. There are also the white and grey ones without any glaze remaining, which have been either blue or green. The evidences for these transformations are innumerable in the half-way stages, not only on scarabs, but also on ushabtis. That the cowroid-shaped amulets with a rope-border decoration on the back certainly belong to the Hyksos period, and can be fixed to any other but rarely, is so important a piece of information that one would like to know by what steps Mr. Petrie has arrived at this conclusion. He says,*

also, that he has been assured that all the scroll-border scarabs come from Abydos. This is extremely curious, if true, seeing that these little objects form almost the only continuous monumental links between the VI and XI dynasties. To him is due the discovery of "double-reading" scarabs; i. e., of scarabs inscribed with hieroglyphic anagrams composed of two names having one or more signs in common. Of these, and of the re-issues of scarabs inscribed with the names of earlier kings but produced under later reigns, Mr. Petrie gives some useful examples.

Enough has been said to show that *Historical Scarabs* is invaluable as a standard of comparison, and as a guide to the study of a very fascinating branch of Egyptian archaeology. One has but to note the confusion which reigns in the scarab-cases of most provincial museums at home and abroad to estimate its value to curators.

It is impossible to say too much in praise of the exquisite skill with which Mr. Petrie has drawn these 2,220 scarabs, reproducing every beauty, every blemish, and even every fracture as it stands. Photography could not render them more faithfully. Each is given of exactly the size of the original, and to each is appended a brief indication of its material and color.—AMELIA B. EDWARDS, in *Academy*, July 19.

S. ROCHERLAVE. *Essai sur le Comte de Caylus*. L'Homme—L'Artiste—L'Antiquaire. 8vo, pp. xv, 384. Paris, 1889; Hachette.

German writers, like Stark (*Handbuch der Archäologie der Kunst*), have long since recognized the important position held by the Comte de Caylus in the renaissance of archaeologic study, but this work is the first attempt to place before us the interesting personality of the many-sided man who was in various ways Winckelmann's predecessor, and whose methods are thought by some to be "almost more in conformity with the general currents of modern science than the inspiration and eye of genius of a Winckelmann" (Stark, p. 366).

Caylus was born in 1692 and died in 1765, the year after Winckelmann published his *Histoire de l'Art*, the year before his *Monumenti antichi inediti*. He served brilliantly in the army in his early youth, and when peace brought his career to an abrupt close he travelled in Italy and through the east. Shortly after 1730, having settled in Paris, he began his activity as an artist. He became the promoter of the *Académie Royale*, shortly after 1731, when it elected him a member, and was soon recognized as the protector and educator of promising artists. By his desire to assist in the renovation of art, he was led to the study of ancient art first from a technical and then from an artistic standpoint. In 1742, when he was elected to the *Académie des Inscriptions*, he commenced to study antiquity as an antiquarian, and, beginning in 1749, he read before the society more than fifty memoirs. In the meantime, he had become

the greatest collector of his age, having his agents all over Europe and even in the East, and he was thus led to concentrate his archaeological endeavors on the publication of a *Recueil d'Antiquités*,¹ of which seven volumes were issued between 1752 and 1767, the materials for which were furnished mainly from his own collections. His skill and facility as an engraver and etcher (for he executed over three thousand pieces) was of great use to him in this work and enabled him to secure, in a greater degree than had ever been done before, the exactitude of reproduction that was his principal aim, while the breadth, boldness and character of his style were in happy contrast to the mannered affectation of his time, and by his example as well as his precept he popularized the great old masters. But it is as an archaeologist that he comes before us in a peculiarly interesting aspect. Before him there had been only pseudo-erudite antiquarians, without general or systematic knowledge, incapable of pronouncing either on the age, genuineness, or style of a work of art, or of understanding the place of art and archaeology in civilization. Caylus presided over the revival of the study of antiquity by archaeology and of the study of art by antiquity; he stood at the source of what proved to be a double stream which became divided as early as Winckelmann, who was the founder of the æsthetic as Müller was of the archæologic school. Caylus was an empiricist, and he began his study on the side of technique for purposes of the practical application of ancient methods to modern art. His insatiable curiosity, his indomitable perseverance, his versatility, enabled him to penetrate far into technical secrets. His most noteworthy feat was the rediscovery of the process of encaustic-painting in 1754. In this branch of his *Histoire*, it is quite clear that Winckelmann owes nearly all to Caylus. The same tendencies led him to investigate the origins of art; and in this study of archaism, wherever he found it, Caylus had no rivals for more than a half-century. It would naturally be supposed that this would lead him to specialize in the field of the history of art. But here we meet with his dislike of generalizations, his materialism, his love of dissecting rather than constructing: the hand, not the mind, was his subject. And yet we discover, here and there, traces of a theory of the history of art that is interesting as preceding and differing radically from Winckelmann's. With Caylus, art was subject to certain general laws of development, wherever it was, and the arts of different countries were interrelated. In contrast with this is Winckelmann's well-known theory of the spontaneous, independent indigenous character of the art of every people. For Caylus, therefore, the arts of the Egyptians, Phœnicians, and Etruscans were important both in themselves and for their relation to Greek art; whereas Winckelmann treats them in a perfunctory manner and hastens

¹ *Recueil d'Antiquités égyptiennes, étrusques, grecques, et romaines*, the words *et gauloises* being added with the third volume.

to Greek art, over which he will tolerate no external influence. But, while Caylus may be considered to have had a keener historic sense from the archæologic point of view, he was utterly wanting in æsthetic sense. He had no appreciation of the beauty of a work of art: beauty irritated him: he wished to have his curiosity aroused, to be convicted of an ignorance which he must attempt to overcome, to meet with an obscurity upon which he could throw light, to reapply some ancient and long-disused method. Nothing was too ugly or too insignificant for him. He quickly passed from technical points to questions of interpretation, and here, also, he is the pioneer of the modern school; for example, in the study of figured vases, the application of mythology to art, and the ability to reconstruct a lost style from a single insignificant figure. Such was his divination of the art of the Ancient Empire in Egypt, a period of expansion and freedom which preceded that of immobility. Such also was his assertion of the Greek origin of a large class of the so-called Etruscan vases. The scrupulous exactitude of his descriptions (entirely new in this field of work) very likely served as models to Winckelmann, than whom he may be said to be more thoroughly scientific on a much lower plane. Caylus lacked idealism, enthusiasm, artistic sense: therefore he made but little impression as an archæologist; while Winckelmann carried all before him. But Caylus was an invaluable guide for the unwary, a model for specialists. Therefore, while the public did not know much of him in this capacity—but revere him as a patron of art—his memory has lived among students as their first and greatest trainer; the precursor, if not the founder, of a science with a distinct object, a well-defined critical apparatus, a consistent method, an organic life—even though it be painfully limited in its sphere, and more useful as an instrument than as an end. Caylus and Winckelmann together form a complete whole, each supplementing the other.

This is a summary of a novel and interesting memoir, written with keen appreciation and in a good style.—A. L. F., JR.

GUSTAVE SCHLUMBERGER. *Un empereur byzantin au dixième siècle: Nicéphore Phocas*. 4to, pp. iv, 781. Paris, 1890; Firmin Didot.

With one exception this is the longest monograph devoted to any of the Byzantine emperors. It is written by a scholar who has made for fifteen years a specialty of Byzantine history, and who has created the special branch of Byzantine sigillography. The book is not merely a recital of military actions and diplomatic negotiations, but is a summary of the military, social and political life of Constantinople toward the year 960, illustrated by descriptive geography, archæology, and numismatics. The figure of Nikephoros, strong, brave and pitiless, with a peculiar combination of asceticism and love of adventure, is made to stand out with clear-

ness and some partiality. The style is vivid and too highly-colored, except for the purpose of a popular work, but it has the merit of exciting the interest and even enthusiasm of the reader. The copious illustrations, of extreme interest, are taken from about 250 monuments of capital importance for Byzantine history, and are for the greater part inedited.—S. REINACH, in *Revue Critique*, 1890, No. 26.

MAX SCHMID. *Die Darstellung der Geburt Christi in der bildenden Kunst. Entwicklungs-geschichtliche Studie.* 8vo, pp. iv, 128. Stuttgart, 1890; Hoffman.

This is one of a number of monographs that have appeared recently in Germany upon special groups of subjects in Christian art, such as Dobbert's study on the Last Supper¹ and Kekulé's on the Creation of Eve.² It consists of two parts,³ a catalogue of the monuments and an historical and critical dissertation. The catalogue not only contains a careful description of each work in detail, with copious references to authorities, but gives, in each case, an illustration. This is the material upon which the thesis is based. The fault to be found with this part of the work is, that the crude outlines that parody the monuments not only are most inadequate, being useless for any purpose except for an idea of their composition, but they are often repulsive. As nearly all the monuments had been illustrated elsewhere, it appears singular that exact reproductions from these earlier outlines were not preferred. The result is that a student is forced to refer, whenever possible, to other books, in order to know anything of the style and period of the monuments.

In the introduction the author examines under what influences of dogma, liturgy, ritual, etc., the works enumerated in the catalogue were produced. The subject of the relative influence on art of the historical and of the legendary accounts of the Birth of Christ is extremely interesting, but could hardly be satisfactorily treated without a more general discussion of such a relation. The historical section, or the thesis proper, follows. The earliest works belong to the West and begin with the fourth century; of Eastern art the author knows no monuments earlier than the sixth cen-

¹ *Das Abendmahl Christi in der bildenden Kunst bis gegen den Schluss des XIV Jahrhunderts in the Repertorium für Kunstwissenschaft*, 1890.

² *Ueber die Darstellung der Erschaffung der Eva in the Jahrbuch d. k. d. Archæolog. Instituts*, 1890.

³ The following is the Table of Contents. *Katalog*, s. 1: *Einleitung*, 43 (1. *Lehre von der Geburt Christi*; 2. *Legende von der Geburt Christi*; 3. *Feier der Geburt Christi*). I. *Geburt Christi in der altchristlichen Kunst des Abendlandes bis zum VI Jahrhundert*. 1. *Wandmalerei*; 2. *Sarkophage*; 3. *Quellen der Geburtssdarstellungen der Sarkophage. Eckurs. Krippe und Wiege*. II. *Geburt Christi in der oströmisch-byzantinischen Kunst*. III. *Geburt Christi in Westrom seit dem VI Jahrh.*

tury. The principal branches of art referred to are: frescoes; sarcophagi; and, later, illuminations and ivories. The fourth and fifth centuries constitute the first period in the development of the subject, and it was then a favorite one with the artists of the West. The second period begins, after the close of the epoch of the Roman sarcophagi, in the sixth century, and at this time the apocrypha have more influence than before upon the artists of both East and West. The Byzantine influence upon the West from this time to the Carolingian period is admitted and discussed. The type of this subject was then firmly established. The manner in which it was developed in the Carolingian and succeeding periods will be the subject of a second study which we are promised by the author.—A. L. F., JR.

WARWICK WROTH. *Catalogue of Greek Coins. Pontus, Paphlagonia, Bithynia and the Kingdom of Bosphorus.* Edited by Reginald Stuart Poole. 8vo, pp. XLIV, 252; pls. XXXIX. London, 1889.

This volume consists of a general introduction, a descriptive catalogue, a series of indexes, and phototype plates. First are treated the civic coinages of Pontus, Paphlagonia and Bythnia, and these are followed by the regal coinages. The first city to strike coins in these districts was probably Sinope, about 480 B. C., other cities which issued coins in the fifth century were Astakos, Chalkedon and Herakleia. The other cities which coined money before the time of Mithradates the Great began to do so in the fourth and third centuries B. C. The coins of this district fall chronologically into three periods: (1) those which were coined before the time of Mithradates, (2) coins of the Mithradatic period, (3) coins of the Imperial period. The latter class is by far the largest, and exhibits the following types: (a) mythologic and religious, (b) Roman imperial, (c) agonistic, and (d) geographic. The coins of the first type show that the divinities which occur with greatest frequency and at the largest number of cities are Asklepios, Herakles, Pallas, Dionysos, Zeus, Serapis, Nike. Other divinities who occur often, but less frequently, are Apollon, Aphrodite, Demeter, Kybele, Artemis, Nemesis, and Poseidon. Representations of the Emperor sacrificing, etc., are frequent. Agnostic types are rare. Representations of the City or the Tyche of the City are of frequent occurrence.—A. M.

ARCHÆOLOGICAL NEWS.

SUMMARY OF RECENT DISCOVERIES AND INVESTIGATIONS.

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GENERAL SUMMARY.

The preponderance of Oriental discoveries and investigations is the characteristic of the *News* in this number; and to such an extent that it has been found necessary, from want of space, to defer until the next issue the latter part of the *News*.

There is renewed activity in **EGYPT**. Messrs. Fraser and Newberry, under the auspices of the Exploration Fund and with the hearty support of the English, French, and native authorities, have begun what is hoped will prove a complete and thorough archaeological survey of Egypt. The excavations for the Fund have been undertaken on the site of Herakleopolis by M. Naville; and Mr. Petrie, whom we welcome back to Egypt, has commenced excavations in the cemetery of the ancient empire at Medum. The season promises to be fruitful, though not sensational. In the meantime, the study of Egyptian papyri continues to enrich the domain of Greek texts, and, together with fragments of Plato's *Phaidon*, Euripides' *Antiope*, Menandros, Epicharmos, and several anonymous poems, there comes the announcement of the discovery of Aristotle's Description of the Constitution of Athens. There never was a time when papyri came to light in such quantities, and further discoveries are confidently awaited. It would seem as if we had only begun to appreciate the interest of Mr. Petrie's excavations at Kahun. The use of the round arch and of proto-Doric, Ionic, and Corinthian capitals and columns, both of wood and of stone, are facts of the greatest importance for the history of architecture, dating as they do from the XII dynasty, if we accept Mr. Petrie's conclusions. No less interesting is the similarity between the houses of Kahun and those of the Greeks and Romans. As an offset, we still hear

echoes of Vandalism from various parts of Egypt. The reports from **TUNISIA** show that the recent archaeological campaign, carried on actively at seven centres, was the most fruitful ever undertaken. It is to be regretted that detailed and early reports of these investigations appear not to have been published. M. de Morgan continues to report on his investigations in the early cemeteries of Russian **ARMENIA**, fourteen of which have been studied, which he divides into four groups or periods. For **BABYLONIA** the novelties are more literary than archaeological, for Dr. Peters has not yet made public his report on the excavations at Nippur, which, during the last weeks, were extremely fruitful. Mr. Pinches reports two interesting facts: the existence of a new Akkadian story of the Creation, and the true reading of the name of the Babylonian Herakles, which is not Izdubar but Gilgamesh.

Professor Sayce states with great clearness the results recently ascertained in regard to the early history of **ARABIA** from the inscriptions found by Glaser and other explorers. They are revolutionary, and place before us the picture of a very early purely Shemitic civilization, dating back certainly to the third millenium *a. c.*, with an advanced culture and an extensive dominion, stretching at one time to the frontiers of Egypt. Among other results is that the Shemitic alphabet was neither a Phœnician invention nor derived from Egypt, thus bringing about a good riddance of the fallacy of its evolution from the Hieratic script. It cannot be doubted that the study of these numerous Arabic inscriptions will be of the greatest interest to students of the Old Testament. The **HITTITES** continue to be a bone of contention: Dr. Puchstein denies that they are the authors of the sculptures either of Northern Syria or of Asia Minor, and places these works at a comparatively late date. There is nothing of much importance from **PALESTINE** except the discovery that in the *xv* cent. *a. c.*, before the entrance of the Hebrews, Jerusalem was already called by that name and was governed by a semi-independent king. **PHENICIA** furnishes two items of interest—a study on the rock-cut figures of Kānā, and the welcome information that the magnificent sarcophagi found at Siden are being published by Hamdi Bey, the first number of whose work has lately been issued by Leroux (Paris). The most complete description yet made—tinged with the enthusiasm which these great works arouse in all who have seen them—has been contributed by Dr. Peters to the *N. Y. Nation* (Jan. 8 and 15, 1891).

The investigations in **ASIA MINOR** have been continued, but without remarkable results. Mr. Bent makes an interesting identification in Hierapolis = Kastabala. M. Huart gathers a harvest of Mussulman inscriptions, and the inexhaustible supply of its classic epigraphy furnishes many papers to the reviews of the French and German schools. Professor Ramsay's

most interesting notes concern some "Hittite" rock-cut sculptures at Fraktin and a relief of the same style at Bor. The death of Dr. SCHLIEMANN will not put an end to the excavations at Hissarlik: it is announced that Mrs. Schliemann, as a tribute to his memory, will complete them in the spring. They will be under the skilful direction of Dr. Dörpfeld, who recently reported on the latest excavations and the future plans.

Of interest for prehistoric GREECE is the renewed investigation of the Pelasgians, who are declared by Trendelenburg (following Milchhöfer) to be the creators and carriers of what we term the Mykenian civilization—with its akropoli, bee-hive tombs, and early work in gold and other metals. At Athens there have been found important parts of the large Roman market-place. A call for the better protection of the sculptures left exposed in Athens is counterbalanced by a movement to restore to Athens the Elgin marbles; if this be realized it would be an unparalleled proof of disinterestedness. Delphoi is to be excavated, whether by the Americans or by the French has yet to be determined. The site of the famous sanctuary of the Amyklaian Apollon did not yield what was expected. None of the Archæological Schools are at present engaged in excavations of interest, though quite a number are being planned, such as investigations in the Peloponnesos by the German school. The theatre at Megalopolis is to be entirely cleared and put in order for exhibition. Excavations at Rhannonos have cleared the earlier and the later temple. The discovery of a statue of Themis in the smaller temple appears to show that there were not two temples of Nemesis, but that Themis was worshipped in the smaller one.

ITALY presents a great number and variety of excavations, although none of salient importance. Signor Orsi's report on the temples at Lokroi is extremely valuable for the study of Greek architecture, and has therefore been given in our summary an unprecedented amount of space. We await with interest further light on the statue attributed to Praxiteles found at Verona, as, though certainly not an original, it may give us a new type of Praxitelian invention. Bologna and Corneto continue to yield prehistoric and Etruscan tombs. Discoveries in the Etruscan necropolis of Giardini Margherita at Bologna throw new light on the artistic influence of Hellenism on Etruria Circumpadana as well as on Central and Maritime Etruria. There is an unusually interesting series of items concerning Christian and Renaissance art. The discovery, in Rome, of the basilica of Pope Sylvester I (314-26), containing the tombs of six popes, promises to be of importance for Christian archæology.

The news for Spain, France, Germany, England, America, etc., is deferred until the next issue.

AFRICA.

EGYPT.

EGYPT EXPLORATION FUND.—*Archæological Survey of Egypt.*—We quote the following circular just issued: "The President and Committee of the Egypt Exploration Fund have decided to commence an exhaustive Archæological Survey of Egypt. For this purpose, the services of two gentlemen have been engaged—Mr. George Fraser, a skilled civil engineer and practical explorer; and Mr. Percy E. Newberry, a specially-trained student, who has qualified himself by a careful study of all the printed and MS. materials bearing upon the subject, and who is also a good photographer. Acting with the approval and support of the Director of the Ghizeh Museum, Mr. Fraser and Mr. Newberry have begun work this month (December) in the southern part of the province of Minieh, in the Mudriyeh of Minieh, Upper Egypt; a district peculiarly rich in sepulchral monuments of the XII dynasty, including the recently-mutilated tombs of Berschah and Beni-Hasan, and the celebrated Speos Artemidos. It is hoped that Messrs. Fraser and Newberry may complete their survey of this district during their first and second seasons; and that by the close of their second campaign, they will have measured and planned the monuments, copied and photographed the inscriptions, sculptures and wall-paintings, and taken note of all the depredations which have recently been committed. Thus, an exact record will for the first time be made of the existing antiquities belonging to at least one section of the map of Egypt, and an authoritative standard of reference will be obtained wherewith to collate and correct such errors as have inevitably crept into inscriptions copied and published at an earlier period, when photography was not employed. The first district being exhausted, they hope to undertake equally important scenes of work for many an ensuing season; and so on, if funds and circumstances permit, till the whole of this great task is accomplished.

"The results of each year's work, with maps, photographs, translations and summaries of inscriptions, will be published in volumes uniform with the *Annual Memoirs of the Egypt Exploration Fund*. That the Survey may be as complete as possible, the surveyors propose to collate existing texts with the copies made by all early travellers, in order to fill up lacunæ, and verify the damage done since the commencement of the century. For this purpose, they have already taken careful copies of all published texts belonging to the province of Minieh, besides thoroughly sifting the magnificent portfolios of drawings of the late Robert Hay (1825-37), preserved in the library of the British Museum, and the very valuable collection of sketches, &c., by the late Sir J. Gardner Wilkinson, which, through the

liberality of Sir Vauncey Crewe, Bart., have been deposited with Professor R. Stuart Poole for the use of the officers of the Survey. It would largely promote the objects of the Survey, if those who possess unpublished photographs and copies of texts, wall-sculptures, etc., would kindly follow the generous example of Sir Vauncey Crewe. The co-operation of many foreign scholars including such as have charge of the unpublished treasures of various European museums, has already been promised.

"A Special Fund having been opened for the support of the Archaeological Survey, donations and subscriptions for this purpose are earnestly solicited. Subscriptions will be gratefully received by the Honorary Secretary, Miss AMELIA B. EDWARDS, The Larches, Westbury-on-Trym, Bristol; by the Rev. W. C. WINSLOW, D. D., LL. D., Vice-President of the Fund, 525 Beacon Street, Boston, Mass.

AMELIA B. EDWARDS,

"Vice-President and Honorary Secretary.

"December 20th, 1890."

Explorations for the season of 1890-91.—Mr. Naville is expected to arrive in Cairo before long, and to commence excavations for the Fund on the site of Herakleopolis.—*Athenæum*, Dec. 13.

FLINDERS PETRIE'S EXCAVATIONS.—Mr. Flinders Petrie has obtained permission to excavate this winter at Medum and Lisht. He intends to begin operations in the third-dynasty cemetery at Medum.—*Athenæum*, Dec. 13.

THE PETRIE PAPYRI.—Mr. Flinders Petrie lately brought from Egypt a number of Greek papyri which he submitted to the examination of Professors Sayce and Mahaffy. After their preliminary notice in the *Academy* of Sept. 6, Professor Mahaffy contributes two extensive notes to the *Athenæum* of Oct. 25 and Dec. 6, from which we extract the following.

The Acts of a Greek Probate-Court in the Fayoum.—Mr. Petrie found a small necropolis at a village called Kurob, about six hours' ride from the ancient capital of the Fayoum, the Greek Crocodilopolis, now Medinet-el-Fayoum. The mummies which he there examined were all of the Ptolemaic period. He observed that these cases were made up of layers of papyrus, glued together so as to make the thick carton, which was then glazed and polished. When this gluing has been carefully done, it is impossible to separate the layers, and, indeed, the cases were riddled by insects which live on the glue or gum. But in some instances the process had been carelessly carried out; the layers of papyrus were merely laid together, and so he was able to recover a large number of pieces of papyrus covered with Greek and demotic writing, which had been obtained and used as waste paper by the artisans who made the cases. The Greek papyri Mr. Petrie submitted to Mr. Sayce and to me for examination last August. We

found them to consist of three classes of documents. First, there were three pieces, fragments of the classics which the Greek settlers in the Fayoum had brought with them or copied out for literary reasons. They comprise small portions of the *Phaidon* of Plato, in a very beautiful and careful hand; the concluding scene of the lost *Antiope* of Euripides—some eighty lines in a very careless and much effaced ms.; and a paragraph or two on the duties of a “companion” by some rhetorician whom we have as yet failed to determine. These classical texts we shall publish in the next number of *Hermathena* (the journal of the University of Dublin). Secondly, there are a large number of short letters, memoranda, and accounts relating to land questions, royal decrees, and other internal affairs of the Fayoum under the first three Ptolemies, which Mr. Sayce has undertaken to decipher and to describe. They are far more difficult to read and explain than the third division, which I found to consist of *wills*, and of which I now proceed to give an account.

These documents are evidently not the actual testaments of the Greek citizens of Kurob, which may have been the Arsinoitic Bubastos to which they constantly allude, but an official list or register, like that of our Probate Court, enumerating them according to date in regular order, several being usually entered on the same page of papyrus, which held at least two columns. Not a single one of these documents is complete, though in several cases large portions of two wills are remaining upon the same page. The papyri either were broken intentionally, or have gone to pieces in the difficult process of severing them from one another. In one case only have I succeeded in fitting together stray fragments, and reproducing a text complete except in the heading. But, though fragmentary, the strict formulæ, which recur in them all, enable us to supply from one what is missing in another, and so we can put before the modern reader the exact form of a Græco-Egyptian will of the third century B. C.

Here, then, is the form of these testaments: “In the reign of Ptolemy, son of Ptolemy and Arsinoë, etc., the tenth year, M being priest of Alexander and the Ptolemies, N being Kanephoros of Arsinoë Philadelphos, in the month X, the tenth day of the month, in the city of the Crocodiles, of the Arsinoitic nome (district)—M, the son of N, a landholder, being of sound mind and good understanding, made the following bequests, being about seventy-five years old, tall in stature, fair in complexion, bald, with a scar across his nose, and a mole on his left ear,” etc.

“May it be my lot to keep in good health and manage my own affairs, but should I suffer anything human, I bequeath to [the details follow], and nothing to nobody else. And I name as executors the reigning king and the queen, his sister and wife, and their children. The witnesses are A, a Carian about seventy years old, landholder, from X’s division (of troops),

short, stout, with a scar on his forehead under the hair, etc.; B, a Thessalian of the second settlement, tall, sallow, with a scar on his left ear," etc.

The number of witnesses varies from three to seven, and with this list each document abruptly concludes.

Turning first to the external form and the language of these texts, we find in them what I suppose is perfectly new to us, a large assortment of the handwritings of the Egyptian Greeks of the third century B. C. They vary from large, clear, splendid writing to the most fugitive and illegible cursive. But (except in the signs for year, drachma, and a very few others) there are no contractions. The vocabulary and grammar are by no means careless or faulty. There are some words not known to us save in the *LXX*, a composition of the same date, or in Hesychios, but they are words which may always have been in colloquial use.

When we approach the substance of these documents the first point of importance is the date. The actual years occurring and recurring in this official record are the twelfth, fifteenth, and twenty-second years of the third Ptolemy (235-25 B. C.). In the memoranda we have found older dates, *e. g.*, the thirty-sixth year of the second Ptolemy, but none, of a later reign.

What was the condition of these testators? In the first place, there is not a single Egyptian name among the many which occur, except perhaps the mongrel Philammon. They are all Macedonians or Greeks, or people who came into Egypt with Alexander's army, but of many various nations, from Alexandrians and Eleusinians (the Egyptian Eleusis) to the distant Thracians, Carians, Illyrians, and even Campanians. Many old Greek towns are represented, but not (perhaps accidentally) Sparta and Athens. The facts that most of these people are called *cleruchs*; that they bequeath houses in Alexandria, though they live far away in the Fayoum; that they allude to their old regiments, to their many scars by way of identification; and that they stand in direct relation to the king as their executor; seem to prove that we have before us a military colony or settlement, to which the lands of the Egyptians were granted, and which, therefore, formed the aristocracy of the country. It is remarkable that, with one doubtful exception, they do not bequeath their holdings of land; they only dispose of their personal property, and this in ordinary cases either to a wife or to a son or a daughter. There are two classes distinguished—the original grantees, who are often called hundred-acre men (*ἑκατοντάρουροι*), and a new generation (*τῆς ἐπιγονῆς*).

But these and other details are more suited to a commentary on the texts. I will only here add, that if we compare the Petrie papyri which I have seen—some of them are still to arrive in England—with what has been published in the special journal of Karabaček from the Rainer

papyri, while the variety in the latter is far greater, in length and in good preservation the texts in the former are far more satisfactory.—Oct. 25.

The Classical Fragments.—I am now able to give some further information; and first as regards the dates of the papyri. Neither Mr. Sayce, who has examined the letters and accounts, nor I, who have been reading the other documents, can find among the papyri of Kurob any date later than the last year of the third Ptolemy (about 222 B. C.). There are many from the later years of the second. I think I can account for this sudden termination of the dates, and the turning of so many documents of more or less importance into waste paper. The third Ptolemy (Euergetes I), after a brilliant youth, passed into an inglorious age, and though his kingdom remained undisturbed till his death (222 B. C.) the accession of his son Philopator was marked by great dangers from without and from within. The attack of Antiochos the Great of Syria compelled the advisers of the young king to have resort to the native population for troops, a measure so obsolete that Polybios notices it as a novelty. For the Ptolemies, and even their predecessors, had long abandoned the military class in Egypt, and employed nothing but foreign mercenaries. The native troops in their phalanx won the great battle of Raphia, and, in consequence, they made insurrections against the king, whose whole reign was occupied with these internal troubles. If this be so, it is obvious enough that the foreign Greek mercenaries planted as landlords in outlying parts of Egypt, like the Fayoum, would be the first to suffer. They were probably dispossessed, perhaps murdered, certainly driven away into strong and garrisoned cities, and their papers and furniture would fall a prey to the Egyptians, who used them for such purposes as the manufacture of mummy-cases.

I now approach the classical papyri, of which we have found numerous fragments among the every-day documents which are dated. There is no antecedent probability that the former should be younger than the latter—nay, rather, valuable books would take longer to go to pieces and be used as waste paper if there were no sudden and violent destruction concerned. And the aspect of the classical mss. confirms this probability amply. These mss. are written in far more careful, finished, and explicit handwriting than the every-day work. They are almost as different as our print is from ordinary writing, and can be recognized at a glance. The neat small capitals remind one of inscriptions upon stone, and the early form of particular letters, especially the *z*, will convince any palaeographer that we have really before us *manuscripts on papyrus of the third century before Christ* at latest; some of them may possibly have been brought from Greece by the mercenaries who settled in the Fayoum, and may reach back to the fourth century B. C. Such astounding and unpre-

cedented antiquity in a Greek ms. takes one's breath away, and it is only after the most mature and deliberate consultation and study that I now state it, with the proofs before my eyes.

We have, then, among these fragments—

1. Portions of the *Phaidon* of Plato, reaching through pp. 67-9 and 79-86 of the marginal paging, and amounting to about two pages of print in the Teubner edition. This text is beautifully written on the finest papyrus, and was evidently a book of the most expensive quality in its production. It varies from our *textus receptus* in many small details, chiefly in the order of the words, for reasons which I shall explain when I publish it in our journal *Hermathena*.

2. The concluding scenes of the *Antiope* of Euripides, containing portions of the play not hitherto known, except one fragment of two lines quoted by Stobaios, which Mr. Sayce identified. We have the speech of Hermes, the *deus ex machina*, almost complete, though here and there an effaced line has puzzled us, and the sense is not yet clear. But with the help of my colleagues, Messrs. Bury and Starkie, we have advanced a good way, and the two leaves, broken as they are, will form far the most important relic of this famous play in all future editions of the fragments. They will appear for the first time in the forthcoming number of *Hermathena*. About forty lines will be complete; seventy more being partially lost will afford our writers of iambs ample opportunity for brilliant restorations of the text.

3. Of lesser fragments, only four or five lines in length, or so mutilated as to be of little literary importance, I have found, since the departure of my colleagues to Egypt, (a) a scrap of Epicharmos not hitherto known; (b) a scrap of Menandros, with Demeas as a character; (c) a scrap of a tragedy about Agamemnon and Aulis; (d) fragments of an epic poem on the Trojan war mentioning Hektor and the Trojans, which I cannot find in the *Iliad*; (e) two prose fragments—the one a hortatory discourse on the duties of comrades, illustrated by the case of Achilles and Patroklos, the other a description of the funeral customs of various nations.

I am by no means sure that this is all, but I expect little more in this direction from the present find.

I shall return presently to the private documents, of which Mr. Sayce has only seen a part, but upon which he has made many curious observations. It is very probable that facsimiles of each fragment, produced by the best modern processes, will before long be laid before the public. It is to be feared that the action of air and light upon the papyri, which have been covered with some white substance for gluing purposes, may cause all the ink to fade in various degrees. It is therefore the more necessary that trustworthy copies should be made as quickly as possible.

Quite apart from the substance of these documents, their value as lessons in paleography can hardly be over-estimated. We have not only specimens of Greek writing on papyrus older than anything hitherto discovered; we have also examples of the great variety of handwriting possible at the same date—a variety apparently as complex as that of manuscripts in our own day. The ordering and classification of such documents will naturally require a long time and careful study, but I will answer for it that there will be no unnecessary delay.—Dec. 6.

FRAGMENT OF A LOST GREEK POET.—In the *Academy* of last April (p. 273), I mentioned that a splendid Greek tomb had been found by the natives at Dalgat near Deshlût, in Central Egypt, not far from the site of Phylaké Thēbaikē. An inscription in Greek on the breast of one of the mummies states that it belonged to a certain Sarapous, who died in the 14th year of Augustus (13 B.C.). Among the Greek papyri discovered along with the mummy is a fragment, now in private hands at Siût, of which I was allowed to make a hasty copy. It seems to belong to some lost comedy, and contains several curious words.—A. H. SAYCE, in *Academy*, Oct. 11.

COPTIC MONUMENTS.—M. Gayet has published a work on the Coptic monuments of the Museum of Bâlaq in the *Mémoires* of the French School at Cairo (t. III, fasc. 3). It is accompanied by a large number of insets and plates. This Coptic art is a peculiar mixture of Roman, Byzantine, and native elements: sometimes the latter predominate, and there are sculptures which show (like an *orante* on pl. 39, fig. 34) the naïve rudeness of the Berber sculptures of the Maghreb. The Byzantine mummies reproduced in colors on plates *a* and *b*, are of the greatest interest.—*Revue arch.*, 1890, II, pp. 267–8.

GRÉBAUT'S FORTHCOMING WORK ON THE NATIONAL EGYPTIAN MUSEUM.¹—In the days of the old Bâlaq Museum, under Mariette Pasha, was issued that beautiful and scarce volume, *L'Album du Musée de Bâlaq*, the whole stock of which perished in the fire which destroyed the premises of M. Mourès, at Cairo. The few copies yet extant give the only photographic record of those delightful galleries which were the creation of Mariette. Now, not only has the location of the collection been changed, but new acquisitions have of late poured in from Luxor, from Ekhminim, from Boubastis, from Hawara, Koptos, and many other sites. Thus, in course of time, the old Bâlaq collection will become but the nucleus of a new museum.

M. Grébaut celebrates this new point of departure in the history of the national Egyptian collection by issuing the opening numbers of a great

¹ *Le Musée Égyptien: Recueil de Monuments Choisis et de Notices sur les Fouilles en Égypte.* Publié par E. Grébaut, Directeur-général du service des Fouilles, E. Brugsch-Bey et G. Daressy, Conservateurs (Cairo).

illustrated work, which shall as adequately represent the riches of the new museum as the former album represented those of the earlier building. Its twenty plates are admirably autotyped from photographs. The subjects are interesting and various, comprising the recently-found statuettes of Khafra, Menkara, and Menkauhor of the iv dynasty; of Userenra of the v dynasty; and of one more remarkable than all the rest for character and dignity—an unknown king of the same period. Also, an engraved and tinted plan of the newly-excavated temple of Prince Uatmes at Gûrnah, as well as several plates reproducing the stelæ and fragments of stelæ, there discovered, including two votive tablets to the Bull Apis. Other plates reproduce statues, fragments of statues, and inscriptions of widely separate periods, ranging from the xviii dynasty to the time of Tiberius. Among these are to be especially noted a curious archaic figure of a kneeling slave from the site of Memphis (pl. xiii); a much weathered tablet with a Greek inscription across the base, from Gebelayn (pl. xvi); a remarkable wooden sarcophagus, in the style of the granite sarcophagi of the xxvi dynasty, from Uardan, in the Libyan range of mountains—a site of which we now hear for the first time (pl. xix); and a most beautiful stela (pl. xvii) with incised hieroglyphs and an elaborate funerary tableau in low relief, apparently of the xviii dynasty, in memory of one Entef, a priest, prince, and governor of a province. The figures of Entef and his wife, and the offerings of fruits, vegetables, geese, lotuses in flower and bud, joints of meat, cakes, *etc.*, are rendered with a fidelity and finish, equal, if not superior, to the basrelief sculptures of the tomb of Ti.

None of the monuments represented in this first number have been previously photographed, and all are the results of recent excavation. The importance of the statuettes of the kings of the Ancient Empire cannot be overrated, the only royal statue of this remote period extant up to the present time being those of Khafra discovered by Mariette at Ghizeh.

It is M. Grébaut's intention to make this work as interesting to the cultivated public as to those who are professedly Egyptologists. He will include not only inscriptions, but all kinds of beautiful works of art, such as bronzes, drawings, paintings, embroideries, jewelry, wood-carvings, *etc.* Each part will contain printed matter giving the date, size, and material of every object, and some account of its discovery.—A. B. EDWARDS, in *Academy*, Sept. 27.

REVISION OF EGYPTIAN MAPS.—In 1882, the Intelligence Department of the War Office prepared a map of Middle Egypt in two sheets, on the same scale—1 : 200,000, or three miles to an inch—as the map in four sheets of the Delta. The department has now revised the large area covered by the Fayoum and Wadi Raiân, in accordance with the surveys undertaken by the Egyptian Government to verify the observations of

Mr. Cope Whitehouse. The changes are important, because (1) the Birket el-Qerun is shown to lie nearly due east and west; (2) the Gharnaq district is brought within two miles of the cultivated land in the Nile Valley; (3) the Raïân depression is given with contours. The whole area is depicted with a clearness which brings into striking prominence the strange problem offered to geologists and physical geographers by an area of over one thousand square miles, depressed to 230 ft. below the adjacent alluvial plain, and 150 ft. below the Mediterranean, yet connected with the Nile through a valley a few hundred yards in width. The student of Ptolemaic maps should compare this map with those rendered accessible by Baron Nordenfjöld. He will find reason to believe that, so far as Egypt is concerned at all events, the mediæval cartographers certainly followed a graphic representation which depicts that country as it was in A. D. 150.—*Athenæum*, Sept. 20.

ALEXANDRIA.—A large stone sarcophagus of the Roman age has just been found close to the railway station of Hadra, in the suburbs of Alexandria. It is richly ornamented with sculpture, but is not yet sufficiently disinterred to be opened.—*Athenæum*, Dec. 13.

CAIRO.—VANDALISM AT THE PYRAMIDS OF GIZEH.—A correspondent of the London *Times* writes: The *Bosphore Égyptien* for Oct. 1 announces a new act of astounding vandalism: Three gangs of workmen (under two local sheiks) are daily extracting blocks from the lower courses of the two largest pyramids of Gizeh. These are broken up on the spot and carried away for building purposes. The sheiks allege that they are doing this by permission of the Government: it is said by others that they have obtained only a permit to remove scattered blocks.—*Amer. Architect*, Nov. 22. [This piece of news is so widely spread that its correctness seems certain. If true, it is in itself sufficient to excite our righteous indignation. It seems incredible that such an outrage should be perpetrated under what is practically an English administration. Let the English cease murmuring about the inefficiency of the French Direction and see to it that the period of their rule in Egypt be not signalized as the one most destructive to the monumental records of Egyptian history that the country has ever seen. A little money well employed is all that is required, and it is the business of the British Control to furnish this money.—Ed.]

The *Athenæum* of Dec. 13 says: The writer in the *Times* was correct in stating that a concession had been granted by the Egyptian Government for removing stone for building purposes from the base of the Pyramids of Ghizeh, but the Director of the Cairo Museum intervened before any mischief was done, and succeeded in getting the terms of the concession so far modified as to allow the work to be carried on under the supervision of the museum authorities. Consequently, only the rubbish-heaps

at the foot of the Pyramids are being carried away, and the antiquities found in them are deposited in a place of safety. But it is scandalous that such a concession as that originally made should still be possible in Egypt.

DISCOVERY OF THE CARTOUCHE OF CHEPHREN.—The cartouche of Chephren, the builder of the second pyramid, has been discovered in the course of the excavations. It is written in red paint, like the cartouches of Cheops found on the stones of the great pyramid.

GIZEH MUSEUM AND VANDALISM.—The *naos* which formerly stood at Dimya, near Lake Keroum, in the Fayoum, has been transferred to the Gizeh Museum. It has been removed on account of the Bedouins having committed depredations at Dimay.

The indignation aroused in England by the mutilation of the monuments of ancient Egypt last winter is likely to bear fruit. A proposal has been made to separate the administration of the Ghizeh Museum from the care of the ancient monuments, the latter being placed under the supervision of the Board of Public Works. Col. Ross is spoken of as the probable inspector.—*Athenæum*, Sept. 27, Dec. 13.

OLD CAIRO.—*History of the Mosque of Amr.*—E. K. Corbett has contributed to the *Journal of the Royal Asiatic Society* (Oct., 1890) an able and full paper on the history of the Mosque of Amr at Old Cairo. It was the earliest Mohammedan foundation in Egypt and among the earliest in the whole of Islam, being founded in A. H. 21 or 642 A. D. The original structure was a simple oblong room 28.9×17.34 met., whose low roof was supported by a few columns. It was entirely rebuilt in A. H. 79 (698–9 A. D.), but unsatisfactorily, for a third rebuilding took place in A. H. 92–93 (710–11 A. D.) by Kurra-ibn-Sharik. Additions and changes were made A. H. 133, 175, and 212, when Abdallah-ibn-Tahir ordered the mosque to be doubled in size. Its dimensions then became what they remained. His additions were the great Mihrab and all that is to the west of it up to the *Ziadat-al-Khazin*. The dimensions were 190×150 cubits. Details are given of the addition of various courts; of the burning in A. H. 273 of the greater part of Ibn Tahir's additions and its restoration; of the decoration of the columns in A. H. 324; of the whitewashing of the mosque and the consequent removal of much mosaic decoration in A. H. 387 (997 A. D.). In the fire of 1168–9 A. D., the building was badly damaged and was restored four years later by Saladin, who "restored the old Mosque in Misr, and renewed the Kibla side of the mosque and the great Mihrab, and paved it with marble and inscribed his name upon it." Then began a long period of neglect of the building, so that it quickly fell into decay and ruin, though, at intervals, there were various attempts at restoration. This was observed by a traveller as early as c. 1245 A. D., who speaks of it as "a great mosque of ancient structure, without decoration." The last great

restorations were in A. H. 804 (1401 A. D.) and in A. H. 1212 (1798 A. D.), when a great part of it was rebuilt. So, the mosque as it stands has nothing from the time of Amr, but a good deal from the two succeeding centuries, very much remodelled by fundamental restorations.

The facts given are taken chiefly from Makrizy's famous book on the Topography and Antiquities of Egypt written in 1420 A. D.

Restoration of the Mosque of Barkuk.—Additional restorations are to be made at the Mosque of Barkuk at Cairo. This time it is to be the two naves of the mosque that are to be handed over to the tender mercies of the restorers. The funds for the operations have been already granted by the Government. Considering the manner in which the restoration of the central building was carried out last year, it would be desirable for those interested in the mediæval art of Egypt—of which this mosque is a famous example—to be on their guard.—*Athenæum*, Oct. 11.

HELIOPOLIS.—**DISCOVERY OF HIEROGLYPHIC PAPYRI.**—It is reported that a great find of hieroglyphic papyri has been made in certain newly discovered tombs near Heliopolis.—*Athenæum*, Dec. 13.

KAHUN.—In continuation of the account of Mr. Petrie's excavation of Kahun given on p. 170, we add the following from the *Builder* of Oct. 4.

Kahun, on the borders of the Fayûm, seems to have been founded during the XII dynasty by a colony of workmen engaged in the erection of the memorial temple and pyramid of Usertesen II, and deserted when the work was completed: its date is about 2600 B. C. It is in the form of a parallelogram, the two longest sides facing north and south and closed within a massive wall, constructed, like the houses, of sun-dried brick. The houses to the north, in the more important part, abut upon the town wall and are divided into parallelograms of varying size. Those to the south abut upon a street. Two streets run east and west, connected by another at right angles. Adjoining the town on the west is an annex which appears to have been inhabited entirely by workmen, and somewhat later in date. The diagram (*Fig. 20*) will give an idea of the arrangement of

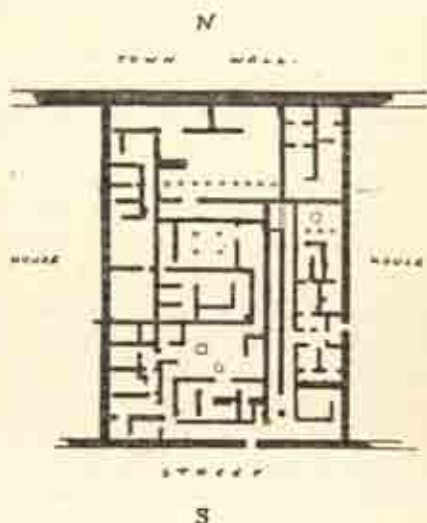


FIG. 20.—Plan of House at Kahun.

one of the principal houses: it is the first time that a house of so early a date has been excavated. The various passages were doubtless intended for the use of different sexes or classes. The open courts with their pillars for the support of surrounding coverings remind of the similar planning of the much later Greek and Roman houses and give us a possible source for their arrangement: some of the houses were decorated in color. The workmen's houses were approached from various narrow streets running from east to west: they were small and crowded. Out of a total number of 2,738 chambers in the town, 2,145 were entirely excavated by Mr. Petrie. The result of the thorough system of excavation

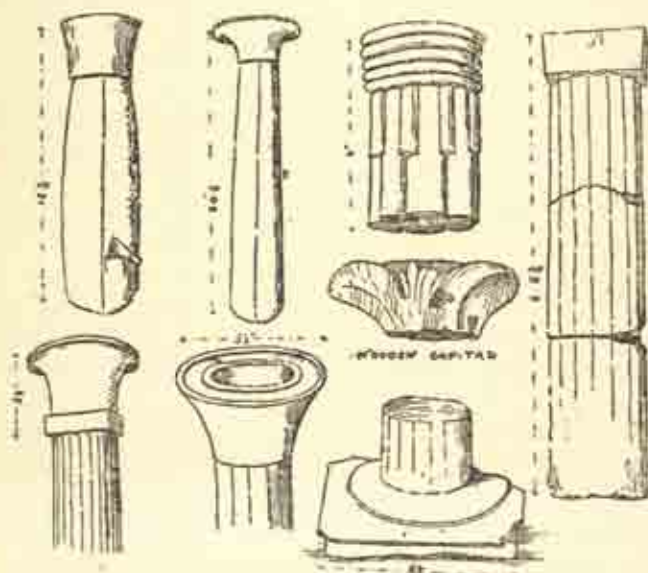


FIG. 21.—Columns and shafts found at Kahun.

was the discovery of many curious items of arrangement, as well as of an enormous number of articles of all kinds. One of the most interesting discoveries is the common use of the semicircular arch. Several cellars were found, which, except where cut in the rock, were found to have arches formed of two rings of headers. This was not the case in merely isolated examples, but was of constant occurrence; showing, from this familiarity with its use, that its invention was much earlier. Another peculiar feature was the traces of columns in the open courts. These stood on the flat, widely-projecting circular bases, so common in later work. The larger and more numerous ones were of wood: a portion of one, octagonal in plan, still existed *in situ*, the upper part being burnt; while in another

place a portion of a carved capital, also of wood, was found. There are, however, many remains of small columns of stone, some of which are proto-Doric, having slightly hollow or straight-lined flutes and square plinths instead of capitals, similar to the so-called Doric columns of the Beni-hassan tombs. A great many fragments of small, pedestal-like shafts, some of similar proto-Doric, proto-Ionic and proto-Corinthian styles, were found, hollowed on top, for the reception of offerings or the support of lamps. All of these are of great interest in a study of the development of the Egyptian shaft and its relation to the Greek. *Figure 21* gives some examples by which to illustrate the above remarks. Of especial interest is the wooden capital, which is a link between the pure lotus and the Ionic capitals. The proto-Corinthian capitals appear to be used indifferently on a lotus-bundle or polygonal channelled shaft, and this may explain the Greek *kymation*.

This being a town of building artificers, many tools were found. Flint implements were found in great profusion, side by side with others of copper, the principal being cut flint knives, chisels, and scrapers. Traces of occupation later than the XII dynasty were found; and this points to the possibility of the town having had some existence separate from the sanctuary adjoining. The better part of the town is, in fact, of much larger area than that specially devoted to the workmen. One of the papyri is dated from the reign of Sebekhotep I of the XIII dynasty. One of the most artistic pieces found is an admirably written papyrus, a hymn to Useresen III.

The pottery from the two sites excavated—Kahun and Gurob—as exhibited in London, gives an admirable opportunity for the comparison of very early and later specimens, as Gurob dates a thousand years later than Kahun. This series is all the more interesting since the existence of Egyptian pottery as a class has not been in proof for many years. There are also examples of foreign manufacture, imported by the Phœnicians, and a few examples called Aegean. The decoration on some of the Gurob vases is extremely beautiful.

KARNAC.—In a letter to the *London Times*, Mr. Poynter draws attention to the slow but sure destruction of the remains of Karnac, owing to the eating away of the bases of the great columns by the mineral salts in the soil. He mentions Mariette Bey's opinion that if left to itself the entire ruin of the temple must be only a question of time.—*Builder*, Oct. 4.

TUNISIA.

REPORTS ON RECENT EXCAVATIONS.—On April 25, M. de la Blanchère, director of antiquities and art in Tunisia, made a report to the *Académie des Inscriptions* on the explorations that had been lately carried on in the

regency. At **CAFSA**, M. Pradère extracted a large mosaic, and then commenced investigations in the ruins of the ancient **THALEPTA**, near Feriana. At **BULLA REGIA**, Dr. Carton, continuing his excavations, studies a necropolis in which the bodies are placed in leaden coffins. At **TABARKA**, M. Toutain opened the tombs of a Christian cemetery which inclosed many mosaics. At **SOUSSA**, M. Doublet has again taken up the excavation of the necropolis of *Hadrumentum* already explored by MM. de Lacombe and Hannezo. At the *Bardo*, in **TUNIS** itself, M. de la Blanchère has extracted from the ruins of the beylical palaces numerous artistic pieces, especially of early Tunisian faience.—*Revue critique*, 1890, I, pp. 360-1.

A further report was made by him through M. Maspéro on August 8, in which M. de la Blanchère dealt with the excavations carried on during 1890. Seven centres of work were established: at **TABARKA**, at the **BARDO**, at **BULLA REGIA**, **BICHARNA**, **SOUSSA**, **CAFSA** and **MAHEDIA**. This campaign is said to be the most fruitful ever undertaken in Africa and one of the most successful of those carried on of late by French archaeology in any part of the ancient world.—*Revue critique*, 1890, II, p. 128.

CARTHAGE.—**DISCOVERIES BY PÈRE DELATTRE**.—The *Chronique des Arts* (1890, No. 33) announces that Père Delattre has discovered, in the necropolis at Carthage, several small vaulted Punic tombs containing a large number of precious objects of Phœnician art. Among these are painted vases, diadems of gold-leaf, necklaces eight metres (!) long, ostrich-eggs covered with delicate paintings, small bronze statuettes, and a great quantity of small objects in bronze and silver, and glass ornaments for women. Cf. *Athenæum*, Nov. 8.

ASIA.

GENERAL REVIEW OF ORIENTAL STUDIES.—The Report by M. JAMES DARMESTETER on Oriental studies presented to the *Société Asiatique* on June 26, 1890, covers a period of over two years. It occupies a space of 180 octavo pages and is a masterly summary of the latest results of research, especially by French scholars, in every country of the Orient. Archaeology in its broadest sense occupies a large share—a share that increases with every Report. These Reports to the *Société Asiatique* have long been famous and are unequalled. We refer our readers to this one for information regarding recent contributions to our knowledge of the East.

POLYNESIA.

PREHISTORIC REMAINS.—Mr. H. B. STERNDALE gives, in the *Asiatic Review* for October, an account of the Cyclopean remains in Polynesia. They are numerous and extensive and include gigantic defensive works. These

are in the form of parallelograms measuring sometimes 200 by 100 ft., with walls often 12 ft. thick. Many are erected on artificial islands, surrounded by canals lined with stones. Mr. Sterndale attributes these works to the early Hindus.—*American Architect*, Nov. 29.

TARTARY.

EARLY INSCRIPTIONS.—Some inscriptions found by M. Yadrintzeff or Yadrintsev on the borders of the Orkhoun river in Siberia were communicated to the *Acad. des Inscriptions* on Nov. 21 by M. Hamy on the part of M. Devéria. They are in a script hitherto undeciphered, provisionally called *Tshudic*, the same as was employed in the inscriptions of the Yenissei recently published in Finland (see *JOURNAL*, v, pp. 400, 513). But a more exact idea of these characters is given by M. Yadrintzeff's publication. The characters are alphabetic, and number from 38 to 42: consequently, this alphabet is far richer than that which the Tartars borrowed from the Nestorians as early as the ninth century A. D., and these inscriptions cannot be attributed to any of the peoples which, having predominated on the banks of the Orkhoun since the foundation of the Khanate of the Ouïgours (744), adopted the Nestorian alphabet or its derivatives. One of these inscriptions is in Chinese, another is bilingual, Chinese and Tshudic. In the first we read the name of a people, the Kien-Kouen, which ceased to be used after 758; in the other, that of a beg, Kiné Khan, who founded in 744 the Khanate of the Ouïgours.—*Revue crit.*, 1890, II, p. 407.

HINDUSTAN.

THE WESTERN KSHATRAPAS.—The noted Indian archæologist, PANDIT BHAGVANLAL INDRAJI, devoted twenty-six years to a study of the Kshatrap coins and inscriptions, the results, under the editorship of E. J. Rapson, appear in the *Journal of the Royal Asiatic Society* for July, 1890. The term *Kshatrapa* was introduced into India from Parthia to designate a *satrap* or military chieftain. The two most important lines of satraps in the early history of India are the northern and the western. The former ruled in Northern India during the first century of our era. The latter held sway, from the last quarter of the first century A. D. to the end of the fourth, over a large territory in Western India, which may be said to have comprised Malwa, Sind, Kacch, Kathiawad, Gujarat proper and the northern Konkan. The first of the western Kshatrapas is Nahapana, who conquered his territory from the king of the Deccan, probably inaugurated the well-known Çaka era in 78 A. D. and became a powerful and independent monarch. His successors were Chashtana, Jayadaman his son, and his descendents in an unbroken line to c. 299 A. D., when the family line is broken. Twenty-seven satraps are enumerated, the last being Rudra-

simha, son of Satyasimha, one of whose coins is dated 388 A. D. The details of reigns and dates are nearly all taken, not from literary but from archæologic sources, especially inscriptions and coins.

PERSIA.

A ROYAL PERSIAN PALACE AT ECBATANA.—Two fragments of black diorite, apparently forming part of the mouldings of two columns, found at Hamadan bear a trilingual inscription of the time of Artaxerxes Mnemon (405–362 B. C.). Hamadan is the site of the ancient Ecbatana, and these fragments are evidently from a palace of the Persian kings, though no traces of such an edifice have yet been recognized. Greek writers, however, allude to the existence of a royal residence in this ancient capital of the Median kings, and state that the Persian monarchs spent the summer there because it was cooler than Susa or Babylon. Polybios (x. 27) describes the palace as being of great magnificence, supported by columns plated with gold and silver, and roofed with silver tiles. Ecbatana was among the cities into which the worship of Anaitis, the goddess whose name occurs in this inscription as well as in that of Susa, was introduced by Artaxerxes Mnemon. Plutarch even calls her “the Artemis of Ecbatana.” Polybios also describes her temple.

In these fragments, Artaxerxes states that he has built an *apadāna*, the reception or throne room which formed the chief part of a Persian palace. “Thus says Artaxerxes, the great king This apadāna by the grace [of Auramazda, of Anaitis and of Mithras I have built:] me may Auramazda, Anaitis and Mithras [protect from all evil and] this that I have built may they not [injure or destroy],” etc.—*Zeit. f. Assyriologie*, Oct., 1890, p. 410.

PERSIAN CHRONOLOGY EMENDED FROM ASTRONOMIC OBSERVATIONS.—M. Oppert read a note before the *Académie des Inscriptions* (Sept. 19), on *A passage of Ptolemy and its Babylonian source*. This passage mentions a lunar eclipse observed at Babylon, in the seventh year of Cambyses or the 225th of Nabonassar, in the night of the 17th to the 18th of the Egyptian month Pamenoth, an hour before midnight. This was borrowed by Ptolemy from Hipparkos, who made use of Babylonian texts. The very text he made use of has been found and published by Strassmaier (*Babyl. Texte*, inser. of Cambyses, No. 400). It is said here that the moon was eclipsed on the 14th of the month Tammuz in the seventh year of Cambyses, three and a half hours after sundown. This date and that given by Ptolemy make it possible to fix more exactly certain dates of Persian chronology. Thus, the death of the pseudo-Smerdis and the advent of Darius should be placed in October 521, and the advent of Xerxes after the month of September 485.—*Revue critique*, 1890, II, p. 211.

ARMENIA.

PREHISTORIC NECROPOLI OF RUSSIAN ARMENIA.—M. de Morgan's important researches and excavations which add so much to our knowledge of the prehistoric culture of ancient Armenia and the Caucasus have already been spoken of on pp. 128–30, and his latest investigations were referred to on p. 331. He now publishes in the *Revue archéologique* (1890, II, pp. 176–202) a report on his recent excavations, and says: "I have carefully explored the prehistoric necropoli of the mountains of Russian Armenia and especially those situated in the forests of the Lelwar, near the well-known copper-mines in the countries of Akthala, Allahverdi, Tchamlouq, Privolnick, etc. By examining with care the neighborhood of the copper deposits, I had hoped to meet with necropoli anterior to the period when iron made its first appearance in these regions, but my expectation proved vain; and in this country, where nature favored the development of the bronze industry, I have discovered only tombs with iron weapons." Fourteen necropoli have thus far been discovered in Russian Armenia and the neighborhood of Tiflis. M. de Morgan seeks to establish among their tombs four divisions. The first three have all the characteristics of a local industry slowly developing without foreign interference; the fourth group shows a complete transformation through the introduction of animal and human figures, spiral decoration, delicate engraving, and even a change in the form of the tombs, which have no longer any analogy with the dolmen. A specimen tomb of each group, with its contents, is described in detail. (1) The *poniard* was the early weapon; the sword not being introduced until the time of the third group, and its origin was Shemitic. (2) The *bow* was the most important and interesting weapon. (3) The conclusion is reached that, there being an evident uniformity between the *system of weights* here in use and that of Assyria, it was the Assyrian who borrowed the system as well as the metals. (4) One of the most interesting classes of objects found is that of the *bronze pins* whose decorated heads were originally square and small, and then became larger and conical and finally prismatic. (5) Most interesting of all are the *belts*. They first appear in the form of simple undecorated strips of bronze in the second period: in the third period they become thinner, wider, and receive some geometric *repoussé* decoration. It is in the fourth period that they take on a special aspect, becoming extremely wide and thin and covered with delicate chasing. The technical part of the work is quite advanced, though we cannot echo the extravagant praise of M. de Morgan for their artistic beauty, it being at times difficult to distinguish the men from the animals. (6) *Pottery*. It is interesting to note the changes in the pottery. It is very abundant in the three earlier groups, less so in the fourth, and

there is a corresponding decline in workmanship. The earliest examples are hand-made and turned: their decoration is produced by the lines made with the burnisher in the unburnt clay, and by circles in relief. In the later works, the forms become more varied; animal forms are copied (e. g., deer-heads forming the handles), and a linear decoration is produced by heavy incisions with the knife. (7) The influence which led to all these archaeological changes in the fourth group was exercised by the Iranian emigration of the Ossethians. This is sufficiently proved by a comparison with objects found in the necropoli of Ossethia, or Koban.

The final conclusions are: I. At the beginning, the Allophyle white population of the Caucasus developed the arts without any trace of foreign influence (first and second groups). II. The population of the Lelwar came into commercial relations with the Assyrians (second and third groups). III. The Ossethians, in their emigration from Iran to the Caucasus, brought new arts which had a considerable influence on the artistic development of the natives. IV. The latest tombs of the Lelwar are posterior to the arrival of the Ossethi in the Caucasus (VIII or VII cent.), and anterior to the Persian conquest.

BABYLONIA.

DISCOVERY OF BABYLONIAN MONUMENTS IN LONDON.—The British Museum has become possessed of three Babylonian monuments which (says the London correspondent of the *Birmingham Post*) were found in Knight-riders Street (not a stone-throw from St. Paul's Cathedral) during the recent demolition of some old houses. These monuments are supposed to have been brought over in the early part of the XVII century by a Dutch merchant who was known to have lived on the spot where they were discovered, and who traded with the East Indies and the ports of the Persian Gulf. The stones, through their great weight, must have fallen through the ruins of the house at the time of the great fire of 1666, and were evidently unnoticed when the houses were rebuilt, they being discovered some distance below the present foundation. The monuments are of the pre-Shemitic age of Ur-Nina, and Gudea, when the Akkadian language was alone in use and characters employed in writing were of the most archaic form. They are of black diorite, which was largely employed by the early Babylonians, and all may have come from southern Babylonia, though they are of three different periods. They will not be on view until about the middle of January.—*N. Y. Evening Post*, Jan. 8, 1891.

NEW AKKADIAN STORY OF THE CREATION.—Mr. T. G. Pinches, of the British Museum, writes to the *N. Y. Independent* of Dec. 4: "Who would have thought that, in addition to the two legends of the Creation now known to have existed with the Babylonians and Assyrians, another would be found? Yet it is so; and this third legend of the Creation possesses

a special interest, for it is written not only in Shemitic Babylonian, but also in the Akkadian language. It forms, in fact, the introductory part of a bilingual incantation, and, as such, has a distinctly Akkadian impress. It may therefore be regarded as a special and independent version which originated, at a very early period, with that nation. The tablet bearing this important record is of baked clay, and was found by Mr. Rassam at Kouyunjik in 1882. The writing is in the Babylonian style, and is very small and close. The lower portion of the obverse and the upper portion of the reverse is broken away, but the most important part of the text is well preserved, as the following translation will show:

TRANSLATION.

"The glorious house, the house of the gods, in a glorious place had not been made;
 A plant had not grown, a tree had not been formed;
 A brick had not been laid, a beam had not been shaped;
 A house had not been built, a city had not been constructed;
 A city had not been built, a foundation had not been gloriously made;
 Niffer had not been built, E-kura had not been constructed;
 Erech had not been built, E-ana had not been constructed;
 The abyss had not been made, Eridu had not been built;
 (As for) the glorious house, the house of the gods, its seat had not been constructed;
 The whole of the lands and the sea also,
 When within the sea there was a stream.
 In that day Eridu was built, E-sagila was constructed,
 E-sagila which the god Lugal-du-azaga founded within the abyss.
 Babylon was built, E-sagila was completed.
 He made the gods and the Aunnaki altogether.
 The glorious city, the seat of the joy of their heart, he proclaimed supremely.
 Merodach bound together the *amam* before the water;
 He made dust, and poured it out with the flood.
 The gods were to be made to dwell in a seat of joy of heart.
 He made mankind,
 Aruru, the seed of mankind, they made with him.
 The beasts of the field, the living creatures of the desert he made.
 He made and set in their place the Tigris and the Euphrates;
 Well proclaimed be their name.
 The *assu*-plant, the *dittu*-plant of the marshland, the reed, and the forest he made;
 He made the verdure of the desert;
 The lands, the marshes, and the greensward also.
 The ox, the young of the horse, the stallion, the heifer, the sheep, the locust
 Plantation and forest also
 The he-goat and the gazelle came before (?) him.
 The lord Merodach on the sea-shore filled up a mound
 formerly had not been
 he caused to be
 [He caused the plant to grow], he made the tree
 he made in its place

[He laid the brick], he shaped the beam
 [He built the house], he built the city.
 [He built a city], he made the foundation gloriously.
 He built [Niffer, the city of] the temple E-kura
 [He built Erech, the city of the temple E-ana].

NAME OF THE BABYLONIAN HERAKLES.—MR. PINCHES writes in the *Babylonian and Oriental Record* for October: "It has been found at last, the long wished-for reading of the name of the well-known hero, and it is neither Gistubar, nor Gisdubar, nor Gisdubarra, nor Izdubar, nor finally Natusit, but GILGAMES. The text which gives it is from Babylonia and is numbered 82-5-22, 915 [Brit. Mus.]. There, in the fourth line of the obverse, we have it: *D. R. Gi-gan-maš* | *D. R. Gi-il-ga-meš*. *Giš* has changed into *gil* before the following consonants."

Professor SAYCE remarks on this discovery (*Academy*, Nov. 8): "Mr. Pinches announces a discovery which is of considerable interest to Assyriologists. The phonetic reading of the name of the hero of the Chaldean Epic proves to be *Gilgames*. Now this is evidently the same name as that of *Gilgames*, given in the *Hist. Anim.* of Aelian (xii. 21), which has been corrected into *Thilgames*, as we now see, erroneously. *Gilgames*, it is stated, was the son of the daughter of Sakkhoras, king of the Babylonians. The king had been forewarned that he would be slain by his grandson, and accordingly had imprisoned his daughter in a tower to prevent the prophecy from being fulfilled. Of course, a husband surreptitiously made his way to the imprisoned lady, and a child was born, who was flung from the tower, but saved by an eagle while in mid-air, and brought up by a gardener. In the latter part of the story the legend of Sargon of Akkad seems to have been attached to that of *Gilgames*."

"The story is so closely related to that of Akrisios and Danaë that it is difficult not to believe it to have been the origin of the latter. If so, *Gilgames* will be the prototype of Perseus. This will account for the points of resemblance between the adventures of Perseus and those of Herakles the double of the Chaldean hero."

Dr. W. HAYES WARD adds to the above the following note (*Academy*, Dec. 13): "It is curious that the same October issue of the *Babylonian and Oriental Record*, which contained Mr. Pinches's announcement of the discovery of the name *Gilgames*, contained also the material for confirming Mr. Sayce's subsequent identification of *Gilgames* with Aelian's *Gilgames*. In that number was an article by myself, in comment on Sir Henry Peek's Collection of Cylinders, edited by Mr. Pinches, in which I recalled that No. 18 of that collection had been previously published by me, and had then been compared with another cylinder which I saw, and

of which I took an impression in Southern Babylonia. Both of these cylinders give the representation of a small naked human figure astride the back of a flying eagle and holding to its neck. I said that 'we must wait for Eastern mythological literature to offer us its variant or original of the Ganymede myth.' Here we seem to have the explanation. The personage being borne by the eagle on these two cylinders, which I offered evidence to show were archaic and from Southern Babylonia, is apparently no other than the Gilgames of Aelian, the Gilgames of Mr. Pinches's Syllabary, and the *Gishubar* of the famous Babylonian epic. The two dogs looking up at the eagle and the child are not in a worshipful attitude—an idea of animals foreign to Babylonian art—but are disappointed of their prey. It is not unlikely that the man driving his flock on both these cylinders is the husbandman to whose care the child was committed by the eagle.

"George Smith first found for us the portrait of Nimrod; it is interesting to see how we are slowly recovering his biography."

THE ZODIAC AND CYCLES OF BABYLONIA AND THEIR CHINESE DERIVATIVES.—T. de LACOUPEURIE writes to the *Academy* of Oct. 11: "Last year, in the *Babylonian and Oriental Record* I gave a detailed list of more than one hundred items showing, I think to demonstration, that the oldest civilization of China was borrowed from that of Elam and Chaldaea, and dates for the most part from the middle of the third millennium B. C. The collective importance of these items may be judged from the fact that the derivation of the Chinese characters does not count for more than one unit in the total.

"I have now to record a further advance from the evidence afforded by the Chinese cycles, months, and zodiacs. It was in the *ACADEMY*, on Sept. 1, 1883, that I published my first attempt at identifying the words of the Chinese cycle of ten with the ten numerals in Sumerian-Akkadian. Since then, better readings of the latter and more correct sounds of the former have been obtained, and the evidence has become much stronger and more convincing. So far as concerns the cycle of twelve, I have shown that the full names for it which appear in the *Ech-ya* vocabulary (500 B. C.), and in the *She-Ki* (150 B. C.) are identical in some cases, and obvious corruptions in others, of the old Shemitic nomenclature of the Babylonian months before the reform of the calendar. As to the ordinary names of the duodenary cycle, it is only recently that I have been able to identify them with those of the Babylonian zodiac in their shorter forms. [A comparative series of Sumerian and ancient Chinese zodiacal names then follow.]

"Within the limits of Chinese phonetics, the identification is pretty clear in all but two cases, and in no case where the meaning is known or probable on both sides is there any opposition between them. Moreover, the comparison shows that the selection of the well-known symbols of the zodiac had not reached its completion when the knowledge of the above

list spread eastwards. Another of the Chinese cycles is traceable to a Babylonian origin. The twelve *ts'e*, which mark the twelve places where the sun and moon come into conjunction, and are thus in some degree analogous to our signs of the zodiac, agree phonetically in nine cases out of twelve with the non-Shemitic readings of the Babylonian signs of the month."

BABYLONIAN AND ASSYRIAN CYLINDER-SEALS AND SIGNETS IN THE POSSESSION OF SIR HENRY PEEK.—By Theo. G. Pinches. (Privately printed.) The catalogue of this interesting little collection has been prepared by Mr. Pinches with his usual learning and accuracy. In a short Introduction he gives a sketch of the different periods which may be distinguished in the history of the art of seal-engraving in Babylonia—the first, from about 4000 to about 2600 B. C., of which the artistic character seems to be wholly Shemitic, and to which belong Nos. 1 and 3 of the present collection; the second marked by Akkadian influence, and by the preference of the craftsmen for devotional rather than heroic subjects; and the third, extending from about 1000 to about 400 B. C., in which the Shemitic character reappears, though not without a strong admixture of Akkadian elements. The most interesting of the seals described are naturally those with inscriptions. No. 1, a fine specimen of the first period (or, according to MM. Menant and De Clercq, of the Agadé school of engraving) represents in two incidents a struggle between a lion and a bull. It is inscribed, apparently, with the owner's name, *Amel-ili*, with which Mr. Pinches compares the Biblical Methusael (*Mutu sa ili*, "Man of God"). The subject of No. 4, which is of the second period (M. Menant's school of Ur), is devotional. Three figures appear to be engaged in the worship of a central female goddess, and the inscription reads: *Anu-iddin apil Islan-si arad Nin-si-ana*, "Anu-iddin, son of Islan-si, servant of the deity Nin-si-ana," that is, of Ishtar as the planet Venus. No. 10 is important not so much for the subject represented as for the owner's name, "Mattatu", daughter of Ahuni, servant of the goddess Ninak (?). The form *Mattatu* must be referred to the comparatively rare root *natānu*, "to give," and Mr. Pinches finds in this inscription a confirmation of his theory that the root *natānu* was introduced by the trading population of Babylonia. "There is hardly a doubt that Mattatu and her father Ahuni were, like Bin-Addunatan in the time of Nabonidus, of foreign (western) origin." No. 16, of Babylonian workmanship, bears the inscription frequently met with on cylinders of this class, *Martu dumu Ana*, "Martu, son of Anu," a god otherwise known as "the Rimmon of storms." The catalogue is furnished with serviceable reproductions of all the objects described; and on this account, as well as owing to the fullness and minuteness of the explanatory matter, it would be of great assistance to a beginner in the study of this important and fascinating department of ancient art. Mr.

Pinches has also prepared a catalogue of the Babylonian tablets in the same possession. They are twelve in number, and, with the exception of one belonging to the reign of Samsu-satana, range in point of date from the period of Nabopolassar to that of Darius. The texts are translated in full.—*Academy*, Nov. 1.

THE RIGHTS OF WOMEN IN BABYLONIA.—The unusual liberty and rights enjoyed by women in ancient Babylonia has received another confirmation from a contract-tablet of which an analysis was lately given by M. Oppert to the *Académie des Inscriptions* (Sept. 12). In it a woman bequeathed to her daughter, in fee-simple, all her fortune; reserving for herself only the usufruct of it during her lifetime.—*Revue crit.*, 1890, II, p. 211.

SIPPAR.—THE DISK OF THE SUN.—Fr. v. Schell publishes in the *Zeit. f. Assyriologie* (v. 4, p. 399) a translation of an inscription of Nabonidos which treats of his restoration of the *Emggil* and *Esida* temples at Babylon and the *Ebabbara* temple at Sippar. In the latter temple the king placed a new disk of the sun. From *WAI*, v. 60, we learn that the ancient object was a solid opaque disk, probably of alabaster, on which was applied in relief a radiating gold sun. The radiating sun in the centre formed a prominent projecting nucleus. This symbol rested on a kind of altar (*tenû*), and was placed before an image or statue personifying Šamaš. The whole was called the Disk of the Sun.

The disk of the *Ebabbara* temple was in bad condition, it had suffered many accidents and undergone many repairs. Nabonidos wished to reconstruct it all in gold, but the Ancients of Babylon and Sippar wished it to be made just like the old. The king consulted the oracles of Šamaš and Adad and submitted their oracle to Marduk, who confirmed the desire of the Ancients. He says: "I made therefore anew, with the art of the gods Gushkinturda and Ninsadin, a gold disk like the old one with alabaster, erected on some *samulli* and *ukarat* adorned with precious stones. I made it brilliant as the day and placed it before Šamaš my lord." The *Ebabbara* temple had been built by Narâm-Sin, whose foundation-brick Nabonidos found.

ARABIA.

LATE CONCLUSIONS REGARDING EARLY ARABIAN HISTORY.—Professor Sayce has contributed to the *Contemporary Review* for November an article in which he summarizes the results "of the startling archaeological discoveries" made in Arabia, as they have finally reached a stage when many of the earlier conclusions previously referred to in the *JOURNAL* (vol. IV, p. 343) have been modified and supplemented. The discoveries of epigraphic material are those of Doughty, Euting, Huber and especially Glaser, and their publications are not yet completed. The writings are especially those of Glaser (*Skizze der Geschichte und Geographie Arabiens*), D. H.

Müller and Hommel (*Aufsätze u. Abh. zur Kunde d. Spr., Liter. u. d. Gesch. d. vord. Oriens*). The following results are ascertained.

I. *The Kingdom of Lihhyân*.—The inscriptions of Lihhyân in Northern Arabia do not belong (as Müller thought) to the x-vii cent. B. C., and are not earlier than the fall of the Roman empire. They are strongly influenced by the religious ideas and technical terms of Judaism, and belong to the period when Jewish colonies and Jewish proselytism were rapidly extending through Arabia. The kingdom of Lihhyân arose and decayed at no long interval before the birth of Mohammed.

II. *Kingdoms of Ma'in and Saba or Sheba*.—Dr. Glaser's view of the great antiquity of the Minæan kingdom and its spread from the south of Arabia to the frontiers of Egypt and Palestine is confirmed. It must have preceded the rise of the kingdom of Saba, for the two covered the same geographic area, the cities of Saba being embedded with the territory of Ma'in and flourishing at the expense of the Minæan cities whose names even were forgotten. The kingdom of Saba was flourishing and extended northward in the time of Tiglathpileser and Sargon of Assyria (viii cent. B. C.), and the legend of the queen of Sheba carries the foundation of the Sabæan monarchy back of the x cent. B. C., when it must have already superseded Ma'in, whose culture had then passed away. This explains the lack of reference to Ma'in in the Old Testament. Dr. Glaser shows that the kings of Saba were preceded by the high-priests or *makarib* of Saba—another instance of the theocratic character of the early Shemitic State.

The names of 33 Minæan sovereigns are known, three of them being found by Müller in inscriptions from Teima in North Arabia. An inscription found by Halévy in South Arabia shows the extent of the power of Ma'in. It was made in gratitude for the rescue of its authors, by Athtar and other deities, "from the war which took place between the ruler of the land of the South and the ruler of the land of the North," as well as "from the midst of Egypt, in the conflict which took place between Madhi and Egypt," and for their safe restoration to their city of Qarnu. The authors, Ammi-tsadig and Sa'd, further state that they lived under the Minæan king, Abi-yada' Yathi', and that they were "the two governors of Tsar and Ashur and the farther bank of the river." Hommel explains by *Ashur* the *Asshurim* of the Bible, sons of Dedan (*Genesis*, xxv. 3, 18), and Tsar must be the fortress mentioned on Egyptian monuments as guarding the entrance to Egypt. Dr. Hommel believes the time to be the age of the Hyksos. Thus, Palestine or its surrounding tribes were in immediate contact with and under the protection of the great civilized state of Ma'in.

III. *The Shemitic alphabet not a Phœnician invention nor derived from Egypt*.—The Minæans were a literary people and used an alphabetic system

of writing of such antiquity that, "instead of deriving the Minæan alphabet from the Phœnician, we must derive the Phœnician alphabet from the Minæan or from one of the Arabian alphabets of which the Minæan was the mother; instead of seeking in Phœnicia the primitive home of the alphabets of our modern world we shall have to look for it in Arabia." This being granted, we find (a) that the names given to many of the Phœnician letters agree, for the first time, with their form as seen in the South-Arabian alphabets; (b) that we now understand the South-Arabian alphabets to possess letters which do not occur in Phœnician because the Phœnician language had lost certain sounds which comparative philology has shown belonged to the Shemitic parent-speech and are preserved in the languages of Arabia.

IV. *Influence on estimate of the early Hebrews.*—The advanced culture thus shown to exist among the early Shemitic tribes overthrows many arguments of the modern radical school, who regard the Israelites as illiterate nomads who had no opportunity of becoming acquainted with books or writing until about the time of David. Now it is shown that a very high standard of culture was prevalent not only all about Palestine but in the country itself before the exodus. This has been abundantly proved by the Tel-el-Amarna tablets (JOURNAL, iv. 333, 343; v. 80, 200). There have been found five letters addressed to the Egyptian sovereigns by the king or governor of Jerusalem (see *Jerusalem*). It is expected that from the early Arabian records much illustration can be drawn for the primitive life and belief of the Shemitic tribes, and Professor Hommel believes that they open up "a new and unexpected perspective in the history of religion."

PUBLICATION OF HUBER'S AND EUTING'S INSCRIPTIONS.—The *Académie des Inscriptions et Belles-Lettres*, Paris, will publish the late M. Huber's diary in Arabia, together with the inscriptions collected by him and Professor Euting.—*Athenæum*, Oct. 11.

SYRIA.

THE HITTITES: PUCHSTEIN'S THEORIES.—O. Puchstein has published a study on the Hittites (*Pseudohethitische Kunst, ein Vortrag*, 1890) in which he disputes current ideas on the empire and art of the Hittites. He denies that the so-called Hittite monuments are as early as the XIII or XIV cent. B.C. He places the hunting-scene of Saksche-Gözu in the reign of Sargon II, who conquered Commagene in 708; he places at the same date the sculptures of Sindjirli, in whose type of griffin he sees the influence of primitive Greek art. Some more archaic reliefs transported from Sindjirli to the museum of Constantinople he thinks may be as early as the X cent. B.C. The Hittite hieroglyphs are all later than the IX cent. Mr. Puchstein attaches the so-called Hittite sculptures of Asia Minor to those of Northern Syria, and concludes that the reliefs of Eyouk and Boghaz-

keui are of the ix cent. or later, that the rock-figures of Nymphis are by a Lydian king, and that the entire series have nothing to do with the Cheta of the Egyptian texts but should be attributed to the Mushkaya (*Moschoi*) who invaded Commagene towards 1170. He concludes that "the sculptures of Eyouk and Boghaz-keui relate to the religion of the Kappadokians who still inhabited this region in the time of the Greeks and Romans. Consequently, the art to which these sculptures belong is not that of the mysterious Hittites of the second millenium B. C., but is an astonishing proof of the highly developed culture of the Anatolian and Commagenian populations between 1000 and 600 B. C."—*Revue arch.*, 1890, II, p. 265.

THE NAME OF KARCHEMISH.—M. Menant sustained before the *Acad. des Inscriptions* (June 6) an explanation of the name of Kar-Kemis or Karchemish, one of the capitals of the Hittites. (1) *Kar* is the word for *fortress* and is found in several Asiatic cities, like Kar-Nabu, Kar-Sin, Kar-Istar, etc.: (2) *Kamos* is the name of a god whose worship was spread over Syria and Asia Minor. This etymology is confirmed by an inscription found at Karchemish itself, the present Jerablûs; and also by another from Hamath commented upon by M. Menant at a subsequent meeting, on August 8.—*Revue critique*, 1890, I, p. 480; II, p. 128.

THE GODDESS KADESH AND THE SHERITISM OF THE HITTITES.—Dr. Puchstein, of Berlin, in his recently-issued *Pseudohethitische Kunst* makes a suggestion with regard to the goddess Kadesh, or "Qedesch," and the Hittite city of Kadesh. This goddess is represented, on Egyptian monuments, standing on a lion, after the fashion to be seen on the sculptures of Boghaz-keui and elsewhere. Dr. Puchstein thinks that, if the goddess is to be associated with the city of like name, there is then evidence that the ancient Hittites conceived of their deities in the same manner as did the Assyrians—and, it may be added, the Babylonians. And, according to the treatise ascribed to Lucian, the Syrian goddess, at the temple of Hierapolis, was borne by lions—a statement corroborated in the main by Roman coins of Hierapolis.

There are at least three basreliefs representing the goddess Kadesh, accompanied on her right by an Egyptian ithyphallic deity, and on her left by the Phœnician or Syrian god Resheph. One of these basreliefs is in the British Museum, and others are in the Louvre and at Turin: in them the name of the goddess is Kadesh or Kodesh, that is, "Holy," or "Holiness." The three deities on the monument at Paris are figured by M. Pierret in his *Panthéon Égyptien*. The goddess has upon her head a crescent moon, within which is an orb. The goddess is no other than the great Asiatic goddess Ishtar or Ashtoreth, associated alike with the planet Venus and with the moon. She may have acquired the name Kadesh by

transference from cities where she was preëminently worshipped, especially the noted city on the Orontes. On the other hand, the name Kadesh, "Holy," may be regarded as assigned to the goddess merely on account of her peculiar sacredness, and the explanation of its masculine form used with reference to a feminine deity can thus be explained by the androgynous Ashtar-Chemosh of the Moabite Stone, the male Ashtar, and the androgynous character of Ishtar associated with the planet Venus as a morning star and as an evening star, Venus being in the former case masculine, and in the latter feminine.

But what I particularly wish to bring out is that a goddess depicted after the Hittite manner bears a name identical with that of a very prominent Hittite city, this name being in form Shemitic or even Hebrew. The indication thus furnished should be taken together with other indications of Shemitism furnished by the Hittite monuments.—THOMAS TYLER, in *Academy*, Sept. 6.

HUMANN AND PUCHSTEIN'S NEW WORK.—The important work of Humann and Puchstein, *Reisen in Kleinasien und Nordsyrien*, is published (Berlin, Reimer, 1890). The volume has 69 engravings, and an album of 53 plates and some admirable Kiepert maps. The text comprises three chapters: (1) a journey to Angora and Boghaz-keui in 1882, by Humann; (2) the exploration of the Nemrud-Dagh in Commagene in 1882–83, by Humann and Puchstein; (3) the description, by Puchstein, of the monuments of Nemrud-Dagh, Sakschê-gözü, Sindjirli, Marash, Samsat, etc. [A review of this work will appear in a future number of the JOURNAL].—*Revue arch.*, 1890, II, p. 264.

INSCRIPTIONS IN SYRIA.—M. de Villefosse communicated to the *Acad. des Inscriptions* (May 23) copies of some inscriptions copied in Syria by Jesuit missionaries. I. Latin votive inscription, of the time of the Antonines, found at Masy (Anti-Libanus) between Baalbek and Chalkis. II. Greek inscription at Talanissus, the present Deir-Seman, between Aleppo and Damascus: it is inscribed in small black cubes at the top of a beautiful mosaic which entirely covers the floor of an early Christian chapel; it mentions a *periodeutes*, or travelling-preacher, named John. III. Dedication to Herod, commander of Chalkite cavalry, found at Sour, in the Ledja, on the site of the ancient casern of these horsemen.

In regard to the second of these discoveries, M. de Villefosse signalized analogous inscriptions in the great mosaic of Sour-Babar and those of the Christian basilicas of Orleansville and Tipasa in Mauretania. M. de Vogüé added that this discovery confirmed his judgment that all the Christian basilicas built in the East and in Africa in the IV, V and VI centuries were paved with marble mosaics with commemorative inscriptions. M. Clermont-Ganneau mentioned mosaics and inscriptions of this kind

with names of bishops and ecclesiastical dignitaries at several points of Palestine and Syria, especially at Emmâus (Nikopolis) and, on the other side of the Dead Sea, at Madeba. M. l'Abbé Duchesne showed that the *periodentes* was in the v cent. the head of the clergy of a locality that had no bishop.—*Revue Crit.*, 1890, I, p. 439.

THE KINGS OF KOMMAGENE.—The chronology of the kings of Commagene during about seven centuries, from Darius, son of Hystaspes, to Trajan, has recently been satisfactorily established by Theodore Reinach on the basis of the inscriptions found by MM. Humann and Puchstein, rectified and completed by medals and texts. The ancestor of these kings was the Baktrian satrap Orontes, son-in-law of Artaxerxes Memnon. The founder of the dynasty was Ptolemy, a satrap who threw off, in about 164 B. C., the yoke of the Seleucidae and became king. His son Samos and his grandson Mithridates I married Seleucid princesses. The last king, Antiochos Epiphanes, was deposed by Vespasian. His grandson, Philopappos, was consul in Rome and archon in Athens.—*Rev. crit.*, 1890, II, p. 268.

ANTIOCHEIA (near).—**ANCIENT TUMULI.**—Ed. Schneider, head engineer of the vilayet of Scutari, has sent to the *Académie des Sciences* a note on various *tumuli* which he has studied in the plain of El-Amûk near Antioch. There were found not only Greek and Græco-Roman objects (such as a bronze statuette of a muse holding a volumen, and a beautiful intaglio with a crowned male bust) but others of different and earlier character, as a seal in greenish schist with a rude animal, and a square object with two sides decorated with peculiarly interlaced lines.—*Revue arch.*, 1890, II, p. 264.

PALMYRA = TADMOR.—**A JOURNEY TO TADMOR IN 1691.**—There is published, in the October number of the *Palestine Exploration Fund*, the *Relation of a Voyage to Tadmor in 1691* by Dr. William Halifax, of C. C. C., Oxford, Chaplain to the Factory at Aleppo, from the original ms. in the possession of Mr. Albert Hartshorne, which was obtained in Rome in 1774 by Mr. Thomas Kerrich. It appears to be the earliest exact account of Palmyra in modern times that has been preserved. The account covers thirty pages of the *Quarterly Statement*. It is very detailed in its descriptions and includes copies of a number of Greek and a few Palmyrene inscriptions. The careful architectural descriptions are of great value on account of the greater preservation of the monuments at that early date. The writer was evidently a man of learning and artistic appreciation.

PALESTINE.

PALESTINE UNDER THE MOSLEMS.—Mr. Guy le Strange has published a volume entitled *Palestine under the Moslems*: the work is divided into chapters on Syria, Palestine, Jerusalem, and Damascus, the provincial capitals

and chief towns, and the legends related by the writers consulted. These writers begin with the ninth century and continue until the fifteenth. It is the result of a desire to present to the public some of the great hoards of information about Palestine which lie buried in the Arabic texts of the Moslem geographers and travellers of the Middle Ages.—*Pal. Explor. Fund*, July, 1890.

ROCK-CUT TOMBS NEAR JERUSALEM.—Mr. Schick reports on the discovery of a rock-cut tomb and chapel (*Pal. Expl. Fund*, Oct., 1890).

TOMB—Near **BETHANY**, in the valley running from Mt. Olivet to Lower Kedron, a tomb was found hewn in the soft limestone very exactly and regularly. It consisted of a succession of four square chambers connected by passages, each lower than the other, so that the rays of the afternoon sun can penetrate to the innermost chamber. The middle and largest chamber (13 ft. square) has ten *kokim* or recesses for the reception of bodies cut in three of its sides, each seven ft. deep. In the further chamber there were no recesses but three benches for bodies.

CHAPEL—At **SILWAN** Mr. Schick visited a number of chambers either entirely cut in the rock or built up in front, some of which communicated. In one case the apse indicated that this had once been a Christian chapel, and he infers that in the Middle Ages a convent or Laura of monks or anchorites may have been here, using already-existing Jewish and Canaanite rock-cut chambers. There are Latin inscriptions and crosses cut in the rock.

NOTES.—The following short notes are taken from the *Pal. Explor. Fund Quarterly* for July and October, 1890.

Mr. Hanauer has forwarded a series of photographs of the *rock-hewn altar* near **SURAM**, of *sculptured stones* found at **ARTUF**, of the interesting *sculptured figures* in the cave near **SARIS** and of *stones with inscriptions* recently dug up near the supposed St. Stephen's Church, north of Damascus Gate, **JERUSALEM**.

Mr. Lees has sent an account of the *rock-hewn chambers* at **SILWÂN**, which appear to have been chapels. Mr. Schick has sent drawings and reports of the same, as well as an account of discoveries of *mosaics, etc.*, at the so-called *House of Caiaphas*, **JERUSALEM**, of a newly opened tomb near **BETHANY, etc.**

Mr. Lethaby of **KERAK**, has sent two fragments of soft limestone with *sculptured figures of animals*, found in digging the foundations of a house.

A CANAANITE SEPULCHRAL MASK.—Dr. Chaplin, in riding through **Er-Râm**, secured a curious mask of the variegated limestone of the country measuring 7.3 by 5.7 inches. The back is hollowed and the sockets representing the eyes are very deep. Mr. Flinders Petrie thinks it is probably of Canaanite origin. *Query?* Is it not a sepulchral mask, a variant on the Egyptian forms?—*Pal. Explor. Fund*, Oct., 1890, p. 268.

CUP-STONES.—In the *Zeit. d. d. Palaestina Vercins* (1890, pp. 123-32), Professor H. Gothe gives a treatise entitled *Schalensteine in Palästina und im Alten Testament*. He accepts Salomon Reinach's comparison (*Revue arch.*, 1888, p. 96) with those stones so numerous in Europe, Asia, and America, and called *pierres à écuelles* or *cup-stones*, and shows, by many examples, how prevalent they were in Palestine to both the west and the east of Jordan. They are usually hollows made in dolmens. It has been thought that they were for religious rites, and were used for drink-offerings. The writer finds a reference to such hollowed stones in *Zachariah*, iii. 9, where a stone with seven eyes is mentioned. The origin of such stones is, however, Canaanite or Phœnician.

FROM GENNESARETH TO HÛLE.—G. Schumacher presents in the *Zeit. d. d. Palaestina Vercins* (xiii, 2, pp. 65-75) the results of trips about Lake Gennesareth and northward to the Hûle marshes.

The Mohammedan *Weli* or *sanctuary*, called *sitt iskène*, he found to have been erected, according to an inscription, in 694 A. H. (1295 A. D.). The *sitt iskène* is, according to tradition, the great-aunt of Fatima the Prophet's daughter.

In the ravine called the *Wadel-hamân*, there are wide shafts tunnelled in the rock which diminish in size as they approach the surface. Besides cisterns, there are caves and chambers for dwelling, refuge, or storage.

Beyond *ed-dikki* are some ruins called *er-rafid*. Its fine position, just over Jordan, and the important remains of columns and walls and decorative architectural fragments show it to have been an important place.

PUBLICATIONS BY PAPADOPULOS KERAMEUS.—The well-known investigator of manuscripts, Athanasius Papadopoulos Kerameus, who of late years has acquired much reputation for his catalogues of many of the monastic libraries in Asiatic Greece, has lately composed a voluminous catalogue of the Greek *mss.* in the Patriarchal Library at Jerusalem. He has gone to St. Petersburg for the purpose of its publication. He is at the same time to publish a volume entitled *Ἀνάλεκτα ἱεροσολυμικῆς σταχυολογίας*, which will contain a series of unpublished texts of different periods. He has, moreover, prepared for the press ten miscellaneous texts relating to the topography of Palestine.—*Athenæum*, Sept. 20.

JERUSALEM.—**MOSQUE OF EL AKSA.**—Mr. Petrie writes: "With regard to the age of this building, the irregular use of materials which are of the age of Justinian, the capitals which do not match, the stumpy columns built up of odd material, and the unsuitable proportions of the monolith columns in parts, seem to conclusively show that it must have been built after the Arab conquest, as Professor Lewis maintains. But it appears that its original form was totally un-Arab, a pure basilica, of nave and two aisles, with the clerestory arcade work, above the nave arches, which

is purely Roman in design; a Christian architect was doubtless the constructor of this. The special point to note is the extraordinary thickness of the piers which bound the aisles; these seem to me to be the thick outer walls of the original basilica form, pierced through with arches so as to extend the mosque into the Arab type of a large number of low colonnades, or forest of columns."—*Pal. Explor. Fund.*, Oct. 1890.

THE NEIGHBORHOOD OF JERUSALEM.—The Jesuit Father J. P. van Kasteren contributes to the *Zeit. d. d. Palaestina Vereins* (1890, pp. 76–122) some remarks on the monuments in the neighborhood of Jerusalem, especially the rock-cut tombs and grottoes, as well as cisterns and subterranean passages, at *Er-rûs*, *Wâdi es-sawâhire*. There are also discussions, questions of identification, as of the famous monastery of Euthymios, and a large number of localities are named for the first time. Our readers are referred to the article itself, as the length of it prevents our giving details.

JERUSALEM BEFORE THE HEBREWS.—Among the tablets from Tel el-Amarna, now in the museum at Berlin, five have lately been found which were sent from *Urusalim* or Jerusalem to the Egyptian kings. Their writer was a certain Abdidhaba or Ebed-tob, who claims to have been a tributary and protected prince, and not merely an Egyptian governor, like the rulers of most of the other cities in Palestine. He declares that he had been appointed to his office by "the oracle of the mighty king," who is shown by a passage in one of the tablets to have been a deity. Abdidhaba further speaks of having had dealings with the Babylonians, and refers to an oracle which declared that, as long as a ship crossed the sea, the conquests of Nahrina or Aram-Naharaim and of Babylonia would continue. This was at the close of the fourteenth century B. C. and before the conquest of Palestine by the Hebrews. Prof. Sayce had already discovered the name of Jerusalem in one of the tablets now in the Ghizeh Museum (see *Academy*, April 19, p. 273).—*Academy*, Oct. 18.

To this Prof. Sayce adds a further discovery in a letter to the *Academy* of Oct. 25: "The discovery of despatches from Jerusalem to the kings of Egypt in the fifteenth century B. C., announced in the *Academy* of last week, throws light on one of the tablets from Tel el-Amarna, belonging to M. Bouriant, which I copied three years ago. The imperfect condition of the tablet prevented me at the time from realizing its importance, though I was able to identify in it the names of the cities of Gedor, Gath, Keilah, and Rabbah. But I now see that it also contains a reference to Jerusalem, which is of considerable interest. The passage is as follows: *al sad U-ru-sa-lim-ki al bit AN NIN-IP: su-mu Mar-ruv al sar-ri pa-da-ka-at a-sar nisi al Ki-il-ti-ki*; that is, 'the city of the mountain of Jerusalem, the city of the temple of the god Uras: (his) name (there is) Marruv; the city of the king, adjoining (?) the locality of the men of the city of Keilah.' Here

Jerusalem is distinctly marked out as situated on a mountain, and as being the seat of a famous temple. *Marruv* seems to represent the Aramaic *marē*, 'lord,' and reminds one of the name of Moriah. At all events, we must see, in the deity whose temple stood on 'the mountain of Jerusalem, the *ēl elyōn*, 'the most high God,' of *Genesis* xiv. 18." Cf. Prof. Sayce's article in the *Contemporary Review* for November, 1890.

TELL-HESI=LACHISH.—Full reports of Mr. Petrie's work have appeared in the *Palestine Exploration Fund Quarterly* for July and October, the latter containing the text of his Journals (cf. *Builder*, with illustrations, Sept. 27, Oct. 4.).

It is expected that the excavations will be continued next spring.

MADABAH.—NABATHÆAN INSCRIPTION.—M. Lagrange found at Madabah one of the old cities of Moab, a stone of black basalt with a well-engraved inscription. It had been excavated in December, 1889. The characters are those of the Nabathæan alphabet with a few variants. It reads: "This is the tomb and the two sepulchral monuments that are above it, which were made by Abdobodas, Strategos, to Itibel, Strategos, his father, and to Itibel, commander of the camp at Behitou (?), and Abdatab, son of Abdobodes, the Strategos, in the house of their command, which they exercised twice during thirty-one years of the years of Haretat, king of Nabat, who loved his people, and the monument above was made in his forty-sixth year." The Haretat is the Aretas, king of Petra, father-in-law of Herod Antipas, and the date is 39 A. D. His long reign is thus confirmed.—*Zeit. f. Assyriologie*, Aug., 1890, p. 289.

MASHITA.—A PERSIAN BUILDING.—Mr. Gray Hill reports on the ruins at *Mashita* or rather *Umashetta*, four hours journey from Madeba (or Madabah). They are remains of a large building and enclosure built to the main points of the compass; the sculptured front of the latter and the gateway being to the south. The appearance of the ruins indicates that the buildings were never finished. Some of the details of the ornamentation are quite Persian in style.—*Pal. Explor. Fund*, Oct., 1890.

PHENICIA.

AKKO=PTOLEMAIS=ST. JEAN D'ACRE.—From St. Jean d'Acre comes the report of the discovery of a sepulchral crypt, the walls of which are covered with paintings in fresco. Within were found three sarcophagi in stone and one of lead finely sculptured in basrelief. Beside them were some precious vases and two portraits well preserved, one of a man and the other of a woman. The tomb is thought to belong to some royal family of Phœnician or Hebrew race, possibly Philistine.—*Athenæum*, Sept. 6.

KÂNĀ (near).—ANCIENT ROCK-RELIEFS.—Mr. Schumacher made recently a trip to Tyre to photograph the ancient rock-cut figures mentioned by

Guérin and Renan. They are near the road from Kânâ to Hanâwei, and are in two series, an upper and a lower row facing east. On the first wall, about 40 yards long, there are 20 finished and 11 unfinished figures, varying in height from 2 to 2½ feet. The work is very rude, and, further, the surface is badly weatherworn and the figures are almost entirely defaced: most of them show nothing but outlines. A second series was found on a rock-wall 75 feet below, not straight like the other, but the figures are hewn on the perpendicular sides of a rock of round shape. They face east and west. "Whilst we found among the upper row figures showing some skill and art, we could not discover any such art on the figures below; they all without exception show merely a round ball, representing the head, a long straight neck placed on the remainder of the body formed by a simple quadrangle. This quadrangle often is not broader than the head and therefore of a very primitive appearance. Most of the figures are in a niche; they are in relief of 2 to 3 inches. Most of these lower figures are evidently unfinished, and like the upper ones entirely weatherworn. . . . I venture to think that the figures of the lower row represent a more ancient period than those of the upper, but it is very difficult to state at what period they have been created. I think Guérin is right in calling them anterior to the Greek-Roman epoch, probably Egypto-Phœnician."—*Pal. Explor. Fund.*, Oct. 1890, pp. 259-64. [We have not quoted much from Mr. Schumacher's description of the upper row of figures, because it was so obviously without regard to analogous rock-sculptures which would have assisted him in his study. The one photograph given with the paper reproduces only five of the thirty-one figures, but it is sufficient to show that they are not all standing as Mr. Schumacher fancies. Some are seated on thrones (Guérin had noted a seated divinity) as in the Hittite reliefs and the Assyrian processions of divinities. Also the figure with a long robe falling in narrow parallel folds can be said to be, not a female figure, but, from the analogy of the seal-cylinders, the figure of a priest. The figures are heavy and have no Egyptian characteristics: they were doubtless executed under Assyrian influence, perhaps at the time of the Assyrian conquests. The subject may be either (1) a procession toward a figure, probably that of a king (Assyrian?), or, more probably, (2) a representation of some gods of the Assyrian or Syrian pantheon receiving adoration and sacrifice. Both of these subjects are frequently to be found in Babylonian, Assyrian, Hittite, Persian and Syrian works. It is not necessary that this relief should be considered the work of native artists, as the invading armies, of the Assyrians, for example, were accompanied by sculptors whose office it was to carve such commemorative reliefs of conquests or treaties. The second and lower series of figures appears to be of a totally different style and has no relation to the other. The photograph

which reproduces them, in this article, is not clear enough to allow of any deductions. Maj. Conder's remarks (p. 264), which follow Mr. Schumacher's report, are based entirely on this lower series, and he is evidently mistaken in calling all the figures full-faced: those of the upper series are in profile. His conclusions, therefore, that the sculptures belong to the Roman period, apply only to the second series and with this limitation may be correct.—A. L. F., JR.]

SIDON.—A GREEK INSCRIPTION.—Clermont-Ganneau has received the impression of a Greek inscription from Sidon dating from the 64th year of the city, or 47 B. C.: ΛΕΞΗΛΙΟΔΩΡΟΣ | ΑΠΟΛΛΩΝΙΟΥΤΟΥ | ΑΠΟΛΛΟΦΑΝΟΥΞΑ | ΡΧΟΝΤΟΣΜΑΧΑΙΡΟ | ΠΟΙΩΝΘΕΩΙΑΓΩΓΩ | ΠΕΡΤΟΚΟΙΝΟΥ (sic): "In the year 64. Heliodoros, son of Apollonios, son of Apollophanes, archon of the cutlers, to the holy god, for the community." The wording is essentially Shemitic. The "holy god" recalls the word *gadolah* used in this connection.—*Revue crit.*, 1890, II, p. 408.

THE SARCOPHAGI-RELIEFS OF SIDON.—Hamdi Bey is said to have at length made good progress with the elaborate illustrated work in which it is his intention to make known the treasures of Hellenic art discovered a few years ago at Sidon. The remarkable sarcophagus reliefs in question will not be exhibited in the museum for some time yet; but the jealous secrecy with which they have hitherto been guarded has been so far relaxed as to allow of their inspection by a few professed archaeologists, and still fewer privileged travellers from the West.—*Athenæum*, Nov. 8. The first fasciculus of the above work has already been issued from the well-known Oriental press of Leroux in Paris. The most careful and detailed description yet published comes from the pen of our Babylonian explorer, Dr. John P. Peters, and is published in the N. Y. *Nation* of January 9 and 15.

ASIA MINOR.

Count d'Hulst has been treated with great brutality by the Turkish officials in Asia Minor. Although his papers were in perfect order, he has been thrust into a prison with criminals. He has been compelled to abandon his archaeological researches.—*Athenæum*, July 19.

PROFESSOR RAMSAY'S EXPLORATION IN ASIA MINOR (cf. pp. 197-8; 341-7). **NOTES FROM KAPPADOKIA.**—W. M. RAMSAY writes to the *Athenæum* (of Oct. 18): "From Kaisariyeh we crossed the Anti-Taurus mountains, and on the fifth day reached *Gurun*, a quaint town in a narrow glen through which flows a tributary of the Euphrates, now called the Tokhma Su. The ancient name of the river is unknown. At the upper end of the town the river forces its way, by a fissure a few feet wide, through a mass of rocks, which must originally have closed in the glen. On these rocks

Sir C. Wilson about 1879 observed two inscriptions in 'Hittite' hieroglyphics; and the object of our visit was to obtain copies of them. It took a day and a half of work to copy and make squeezes, for the surface of the rock has scaled off to such a degree that at first we despaired of doing anything beyond making out a few stray symbols. One of the inscriptions consists of six lines of great length; we deciphered about two-thirds of it. The other is much smaller, but still it contains four lines, each about three feet long; about half of it is decipherable; but the rest of the surface has entirely scaled off, and the symbols have disappeared beyond recovery."

Rock-Sculptures at Fraktin = Ferak-ed-din.—"We left the search for the reported monument at Izgin (Sterrett) to some traveller with more time to spare. In Komana and the neighborhood we copied a small number of inscriptions and milestones. We crossed Anti-Taurus again by a more southerly pass than before, in search of a monument alluded to more than once by Prof. Sayce. About forty years ago Mr. E. Calvert was told by a Kappadokian Greek that he had seen a strange relief on the rocks near a village called Fraktin. We found that 'Franktin' was the local pronunciation of Ferak-ed-din, and about a mile from that village we found a relief of singular interest. Had we been trying to imagine a monument which should disprove in the most convincing manner some of Prof. Hirschfeld's views on the interpretation of the sculptures of Boghaz-keui (*Berlin Abhandlungen*, 1887), we could not have constructed one better suited for the purpose. A zone of sculpture about three feet high runs horizontally along the face of the rock, and at the right-hand side is a set of symbols of the usual hieroglyphic kind, beginning with a human hand with the index finger pointing towards the rest. No one could doubt that these symbols are an inscription, expressing a meaning, and intended to be read by spectators; but Prof. Hirschfeld has denied this. The sculptures represent two pairs of deities, the right pair male, the left pair female. In each case the two deities stand facing each other, separated by a curious object that seems a sort of compromise between an altar and a scarecrow. A bird sits on the object that stands between the two female deities. Between each pair is a set of symbols, beginning with the symbol that Prof. Sayce has explained as the 'determinative of divinity.' This interpretation would, I think, occur independently to any person who looked at the divinities sculptured on the rocks of Ferak-ed-din; the names of the figures are inscribed beside them, as is so often the case on Greek vases. The same is the case at Boghaz-keui; but Prof. Hirschfeld maintains that the groups of symbols in a similar position in front of the figures sculptured there are really objects supported on the hands of the figures. I convinced myself that there is no connection between the sym-

bols and the hands; but the sculptures are so much worn that it is quite possible for others, even for such a competent observer as Prof. Hirschfeld, to maintain the opposite view. But the sculptures of Ferak-ed-din resolve the doubt: a connection between hand and symbols never existed, and even the squeeze is, I believe, sufficient to prove this to every observer. The monument at Ferak-ed-din is in excellent preservation, and we can thus detect one interesting fact: the sculpture was never completed. The figures on the left side are finished in every detail; but the goddesses on the right are only shown in outline. The line showing their form was drawn, and the rock around was cut away, leaving a flat surface in relief of the proper shape; but the necessary details were never indicated on this surface, as they were on the figures in the left group. Similarly, the left-hand part of the inscription at the side of the sculpture was complete, but the three or four symbols on the right were merely blocked out in their general shape."

Hittite Inscription at Bor.—"On August 11, we went to Develi Kara Hissar, a distance of twelve hours, where we expected to meet Mr. Headlam. Our intention was to separate for a few days there, Mr. Hogarth taking the direct hill-road towards the Kilikian Gates, while I went round by Nigde to get money and see the result of our letters to Hamdi Bey and Sir W. White. On August 12, I went on to Nigde, a thirteen hours' distance. A Greek clerk at the Government Office then came up to me and said that the remainder of the stone which we had purchased had been found and was now in a house at Bor (where we had bought our part of it); the house belonged to a Turk named Ettima. A telegram arrived from Hamdi Bey to the governor on August 12, ordering that the stone should be handed over to me for conveyance to Mersina, but the Medjliss, *i. e.*, County Council, refused to sanction its deliverance to me. On the evening of August 13, I left Nigde, and hurried down to Tyana, where I spent the night. By an odd coincidence I went straight to the very house which stood on the spot where the stone, the subject of so much contention, had been found thirty-five years before. The owner, a rich Turk, told me that Ettima was his brother; that the stone had been found in two fragments when his father was building the house; that the smaller piece had been given, under the impression that it was of no value, to a Greek who asked for it; and that he had imagined that the larger half had disappeared until our action had turned the thoughts of every one upon old stones, and the missing piece was found to be lying in the house of his brother at Bor. His description of the stone I need not repeat, as it has since been seen by Mr. Hogarth, except that he said the relief represented a man striding forward with the right leg advanced (not the left leg, as is the case so commonly in Egyptian and archaic Greek monuments), with

hieroglyphic symbols all round, and a raised border surrounding the stone; on the border there were marks, which from his description might be either cuneiform characters or a mere ornamental pattern. In the circumstances, the most profitable plan seemed to be to hurry on to Bozanti, discuss the situation with Mr. Hogarth, and put him in possession of the knowledge which alone gave any hope of permission to copy the stone."

LAST NOTES FROM ASIA MINOR.—MESSRS. D. G. HOGARTH and A. C. HEADLAM write to the *Athenaeum* (of Oct. 4): "Professor Ramsay's last letter will have informed you of our fortunes in the Anti-Taurus, and it only remains to give some account of our return journey from the Kilikian Gates to the railway. We parted from Mr. Ramsay not far south of Kaisariyeh, in order to travel by the direct horse-road to the Gates, a road which has been in all ages one of the greatest highways of Asia Minor, and on which accordingly we expected to find ancient remains. The result did not justify such expectations, for nothing early is to be found between Devölü Kara Hissar and the Gates. A late site and tombs near Kerdeley, some remains of Roman period at Eueghil, and a Byzantine fort at one of the silver mines (Boghay Maden) are all the antiquities of the road. At the better-known mines of Bereketli Maden there is nothing at all. We missed Mr. Ramsey at the Gates by a few hours, but found letters from him reporting another important stone at Bor, possibly bilingual; and this decided us to go home by that place. It was necessary, however, to make a slight detour to the west to find the Hittite stone seen by Mr. Davis near the silver mines of the Bulgar Dagh. We were guided by a villager to two stones, one on either side of the deep gorge which runs down from Bulgar Maden to Ali Hodja. Of the first it is impossible to speak with certainty; the native guide pointed to a scarp high up on the face of an inaccessible cliff, and said that it was 'written'; but no sign of lettering could we see from the nearest accessible point. Our own belief is that the 'writing' is a delusion, but verification is impossible without Alpine appliances. On the left bank of the stream we found the stone of which we were in search. The inscription is carved on the face of a rock, almost at the summit of the ridge, and nearly 1,000 feet above the water. As in the case of most Hittite texts, an overhanging face was chosen, the better to guard the lettering from the weather. The characters are incised in the rock—the only known instance of this form of cutting in a Hittite rock-inscription—and resemble generally the two incised texts of Bor and Andaval, described by us in a former letter. The Bulgar Maden text is in five panels, the first two shorter than the rest, and the whole divided and enclosed by lines. The characters are generally of small size, rather unevenly cut, and occupy a space altogether of about five feet by four feet. The average number of characters in a panel is between

70 and 80. Except for a water-worn band which runs down the middle, this text is well preserved, and not difficult to copy. But the overhang of the rock makes it extremely difficult to make a satisfactory squeeze; however, of all but the first line we brought away a very fair impression.

"We turned northwards out of the mountains and struck the high road from the Gates to Eregli and Nigdeh, at a point about four miles east of Ooln Kischlar. In a roadside graveyard we found two inscribed milliaris, the one giving the distance from Tyana, the other apparently from some other place, perhaps Herakleia Kybistra (Eregli). The next day we passed through Tyana itself to Bor, spending a short time on the large hillocky mound which covers the ancient city—a site to be recommended to the excavator of the future.

Hittite Inscription at Bor.—"On our arrival at Bor we set to work to find the stone which had been described to Mr. Ramsay. It was agreed that we were to see the stone, but at night. A single glance was sufficient both to show us that it was not bilingual and to explain why it had been described as such. It was, in fact, the lower half of the stone we had already purchased, and contained a continuation of the Hittite inscription; the legs of the royal figure were covered almost as far as the feet with a long robe, the embroidery on which was extremely elaborate and very carefully carved. This it was which had been mistaken by our informants for letters of another kind. We were unable to buy the stone after our former experience, and found it quite impossible to obtain leave to copy it on any other terms. It remains for the Turkish authorities to possess themselves of it, and fit it to the upper portion, which we have already presented to them.

Hittite Seal.—"A very interesting Hittite seal was sold to us in Bor. It was said by its owner to have been found near the silver mines of the Kara Dag, north of Karaman. The head is rather larger than a shilling, and rests on three lion-paws, terminating in a ring. On the face of the seal is a draped figure in the act of walking to the left with extended arms; the head has a close-fitting cap; the hands are empty. Round the figure is a legend of nine Hittite characters. The material of which the seal is made seems to be an alloy of silver.

"Our journey after this for some time offered little to describe. From Bor we went to Nigdeh, thence to Akserai, and from there across the great central plain to Kadyń Khan, where we joined the great road from Konia. We found nowhere anything of much archaeological interest. Between Kadyń Khan and Ilgün we visited, made fresh copies of, photographed, and took an impression of, the Hittite inscription which Mr. Ramsay had discovered on a former journey. It is situated about half a mile to the east of the main road between Kadyń Khan and Ilgün, and

about an hour north of the Kilitölu Taia. The inscription is in three lines, well carved in bold relief on a large block of stone, but in some parts is a good deal worn by the weather. The last object of the expedition was to inquire into the truth of rumors stating that a second 'Niobe' existed in the Murad Dagb above Ushak. Near Belova, about 4000 feet above the sea, we found a small block of marble about two and a half feet high, forming the lower portion of the statue of a female goddess. The hands lay on the breast in an impossible attitude, not crossed, but both pointing in the same direction; below was a wreath; the lower part of the statue was an uncarved trunk; everything else was lost. The workmanship was late. The statue had just enough character to show that it was not ordinary Roman work, but we found that we had been compelled to perform one of the less pleasing duties of a travelling archaeologist, to wit, dissipate delusions."

EPIGRAPHIC MISSION OF M. HUART.—At a meeting of the *Acad. des Inscriptions* (Nov. 7), M. Barbier de Meynard reported on an epigraphic mission to Asia Minor entrusted to M. Clément Huart, interpreter of the French embassy at Constantinople. Its object was to copy in the *eyalet* of Karamania (the ancient Lykaonia and Isauria), and especially at Konyeh (Ikonion), the mussulman inscriptions, in particular those of the period of the Seldjuk princes (1087 to 1300 A. D.). Fifty-eight inscriptions were collected, mostly Arabic, twenty-five of which were of the Seldjuk period. These texts give new data for the history of this dynasty, which, though of Turkish origin, felt very strongly the influence of ancient Persia.

M. Huart also copied one Greek and two Latin inscriptions, whose interest was shown by M. Heron de Villefosse. They are the most important classic inscriptions yet found in this region. The Latin texts are dedications to Caracalla and to Lucius Aelius Verus in the years 212 and 137 of our era. The Greek inscription mentions one Julius Publius, *λογιστὴς* or curator of the city.—*Revue crit.*, 1890, II, p. 352.

THE TROJAN CONTROVERSY.—We take the following *resumé* of the Trojan question from S. Reinach's *Chronique d'Orient* in the *Revue archéol.* (1890, II, pp. 254-6) for Sept.-Oct. "In the *Berl. phil. Woch.* of Jan. 25, 1890, Mr. Belger, examining the discussion between Schliemann and Bötticher concludes that Hissarlik was doubtless a centre of habitation, but that the hill, during an unknown term of years, must have served as a necropolis. Schuchhart has made an analogous concession in his recent work. But Capt. Bötticher is not satisfied with concessions: in a work entitled *Hissarlik wie es ist*, he maintains, as before his visit to Hissarlik the exclusively sepulchral character of the mound explored by Schliemann. The study of the remains of constructions cannot alone resolve

the question, and Bötticher is right in attaching importance to small objects . . . which, discovered in quantities in a place where no arms have been found, constitute one of the most serious arguments in favor of his thesis . . . Dr. Virchow, on his side, is unyielding (*Verhand. d. Berl. Anthrop. Gesell.*, 1890, p. 130): he affirms that there never was any burying or incineration at Hissarlik." Though the late discoveries have completed our knowledge of the akropolis, there yet remain to be found the city proper, and the necropolis.

AIGAI.—AN AIGIOLIC INSCRIPTION.—Salomon Reinach presented to the *Acad. des Inscriptions* (May 23) a curious inscription in the Aigiolic dialect dating from the end of the fourth century B. C., found 10 kil. north of the city of Aigai in Aiolia. It is a convention between the inhabitants of the district of Aigai and those of Olympia regarding the passage of small cattle from one territory to the other: goats and lambs are free, and rams and sheep shall not pay for their wool. The Olympia mentioned is a mountain east of Smyrna known only by a text of Pliny. That part of the inscription the reading of which is perfectly clear gives five words or forms which are wanting in all lexicons.—*Revue crit.*, 1890, I, p. 440.

APAMEIA.—A CHRISTIAN BASILICA.—Mr. Ramsay has hidden in the *Transactions of the Aberdeen Ecclesiological Society* an interesting notice of a Christian basilica of Apameia, accompanied by a plan. It is one of the most curious churches existing in Asia Minor; an old tradition places it on the spot where Noah's ark came down. Professor Ramsay believes that it replaced, in about the fourth century, a temple of Ζεύς Κλεμενής.—*Revue arch.*, 1890, II, p. 263.

BEIRÛT.—A bed-post of gold and silver, decorated with precious stones and bearing an inscription in English characters showing it to have belonged to Queen Eleanor of England, has been discovered during some excavations near Beirût. It must date from the time of the eighth crusade undertaken in 1272 by Prince Edward. The Ottoman Government has taken possession of it.—*Chron. des Arts*, 1890, No. 31; *N. Y. Evening Post*, July 15.

HISSARLIK.—LATEST REPORT ON EXCAVATIONS.—Dr. Dörpfeld contributes some remarks to the *Athenische Mittheilungen* (1890, pp. 351-2) on the latest discoveries at Hissarlik which since his last report were carried on for six weeks and ended on August 1. The results of the year will be published later, but no full description and explanation of the discoveries can be made until the completion of the excavations during the present season. The most important work of the last weeks was the complete freeing of the s. w. citadel-wall of the second city, and the discovery in it of a sallyport which lay at the foot of the wall (which is preserved to a height of 8 met.) and is c. 1.20 met. wide by c. 2.40 met. high. It is placed in

the angle between the citadel-wall and the west gate, which serves as a tower, and is thus placed as such sallyports were situated in later times. In the excavations in front of the s. w. gate, it had already been ascertained that there were six distinct strata. Since then, deeper excavations have led to the discovery of a seventh stratum, and only underneath this was the level of the second city reached. Each of these seven layers contains walls, pavements, and objects of the most varied description. In some, the houses showed abundant traces of having been destroyed by fire; in others there were but few traces of fire. The buildings of nearly all the strata were simple dwellings of more or less regular form; usually they retain not only their foundations but quite a section of their upper walls.

In the place where excavations have been carried on, important buildings have been found only in the first and fourth strata counting from the top, or, to use Schliemann's early enumeration, in the sixth and ninth cities. Of the latter the buildings, being Roman, have no interest, but those of the sixth city are worthy of study. For, in the first place, they are constructed of larger stones and with more care than those of any of the other strata, and, secondly, a number of fragments of Mykenian vases have been found among them, thus giving a clue to their date. The best-preserved building consists of a rectangular hall with open porch, having thus the same ground-plan as the large *megaron* of the second city (A on plan VII in *Troja*), and is like a simple Greek temple in *antis*. It cannot be decided whether it is a *megaron* or a temple.

The intended excavation of a part of the lower city could not be carried out during the past season, and will form the main object of the next campaign, during which, also, an attempt will be made to open the most ancient of the tombs.—*Of. Academy*, Nov. 29; *Athenaeum*, Dec. 13.

KARIA.—INSCRIPTIONS.—A rich harvest of inscriptions from Karia has recently been published. MM. Doublet and Deschamps give 36 in the *Bull. de corr. hellén.* t. XIV, pp. 603–30. Nine other inscriptions, from Lagina, have been given in the same periodical by M. Foucart (t. XIV, pp. 363–76). For details we refer to the summary of the *Bulletin* given in this number of the Journal.

Walter Judeich publishes in the *Athenische Mittheilungen* (1890, pp. 252–82) a series of inscriptions from Bargyllia, Halikarnassos, Herakleia on the Latmos, Laodikeia on the Lykos, Mylasa and Nysa, copied by himself and Franz Winter in the summer of 1887. To them he adds some that were copied by Ernst Fabricius in the summer of 1888. An account of these inscriptions will be found in the summary of the *Mittheilungen* in the next number of the Journal.

KILIKIA.—RESEARCHES OF J. T. BENT.—At the Oct. 20-meeting of the Hellenic Society, Mr. J. T. Bent gave an account of his recent researches

in Kilikia. He first described the coast-towns of the district, Augusta Sebaste, Korykos, and a third town Korasios, which he has identified as the pseudo-Korakesion of Stephanos of Byzantion. He then proceeded to describe his identification of the Korykian cave. He then spoke of the adjoining cave, only alluded to by Pomponius Mela as Typhonia, and a third cave, on the lip of which was a fortress with an inscription on it stating that it was built under the priest-king Tenkros, in honor of the Olbian Jove, under the superintendence of one Pleistarchos of Olba. Mr. Bent gave an account of several cave-temples of Hermes which he found in this district, and associated them with the worship of the deity of the Kilikian pirates, and Korykos, which Oppian calls the city of Hermes. Mr. Bent then described his exploration of the gorge of the Lamas river, with its numerous rock-fortresses, evidently the eyries of the Kilikian pirates. Then an account was given of the discovery of the capital of Olba itself, and its identification from an inscription on the aqueduct. In conclusion, Mr. Bent described his identification of the ruins of Boudroum with Hieropolis-Kastabala.—*Athenæum*, Oct. 25: cf. *JOURNAL*, 1890, pp. 188, 351-5.

IDENTIFICATION OF SITE OF HIEROPOLIS-KASTABALA.—MR. J. T. BENT writes to the *Athenæum* (of July 19): "Hearing of extensive ruins at a spot called Boudroum, to the north-east of the Kilikian plain, not far from the river Jeihan (anciently Pyramos), the name of which had not been identified, we determined to visit them and to devote some time to the thorough exploration of the district. Boudroum is situated on rising ground about three-quarters of a mile from the Pyramos, just as that river emerges from the narrow defiles of the Tauros, through which it makes its way into the Kilikian plain. The acropolis in the centre of the town is at the extreme edge of a narrow rocky spur of the mountains; a cutting 40 ft. behind this separated it from the spur, and made a road communication between the east and west portions of the town. The area included within the ancient walls must have been over three square miles, and is thickly covered with ruins. The most conspicuous of these is the double row of columns of red and blue conglomerate, which started from the principal gateway, and must have closely resembled, though less ornate, the long colonnade at Pompeiopolis. The columns have Corinthian capitals and Ionic bases; the diameter of the shafts is 2 ft. 8 in., the height 20½ ft., the space for the road between the rows 35 ft., and the columns are at regular intervals of 8 ft. This colonnade extended for a distance of 320 yards, terminating at the back of the theatre; each row had about seventy-eight columns, and only thirty are now left standing, and very few of these in perfect condition. The colonnade ran along the south end of the acropolis, and must have produced a very striking effect. The theatre

is large, the length of the *scena* being 62 ft., but it is too much ruined to give accurate measurements. Besides these there are many ruins of public buildings: one of these was a stadium, another an agora, and a third *thermæ* down in the valley below. Not far from the colonnade are the ruins of a large temple; an aqueduct cut in the spur of rocks behind the acropolis supplied extensive reservoirs with water; many fine *herœæ* are dotted over the flat ground, sloping down to the Pyramos, and there are the ruins of three Christian churches built out of the more ancient remains.

"After a systematic search and the turning over of likely stones, we succeeded in collecting twelve inscriptions which enabled us to identify, beyond a doubt, the name of this ancient city. Four of these inscriptions were from dedications which began with the formula $\Theta\Delta\text{ΗΜΟΣ}\text{ΟΙΕΡΟΠΟΛΙΤΩΝ}$, satisfactorily proving that this town was called Hieropolis in ancient times. On referring to numismatics (Head, *Hist. Numorum*), we find that Hieropolis-Kastabala (Ἱερόπολις Πυράμω , as it is termed) issued coins with the river Pyramos represented as a swimming figure, with an aquatic bird perched beside him carrying a torch (Πῆρ). Other coins with the head of Artemis and the monogram ΙΕΡ are attributed to this place (Imhoof-Blumer). This is what Strabo says about it (xii. 2): 'Two provinces only have cities. In Tyanitis is Tyana . . . at a little distance from this city are Kastabala and Kybistra, towns which approach still nearer to the mountain. At Kastabala is a temple of Artemis Perasia, where, it is said, the priestesses walk with naked feet unhurt upon burning coals. To this place some persons apply the story respecting Orestes and Artemis Tauropolos, and say that the goddess was called Perasia because she was conveyed beyond the sea.' Two of our inscriptions conclusively prove that Strabo's Kastabala was here: one had on it over the dedication the words ΘΕΑΤΕΡΑΣΙΑ ; another found near the temple told us that an honorary statue had been erected 'out of the revenue of the divine Perasia.' Further evidence is given by Ptolemy, who says of Kastabala *Perasia prius dicta*, hence our identity was complete. Of course, from Strabo's statement, Tyana and Kybistra must also be looked for in this locality.

"The second point of interest with regard to Hieropolis-Kastabala refers to the itinerary of Alexander the Great. He marched from Soli (Pompeopolis), crossed the Pyramos at Mallos, and reached Kastabala (Curtius, iii. 7) on the second day, and sent Parmenio forward to reconnoitre the pass. Unfortunately, both the Antonine and Jerusalem itineraries are confused on this point, only speaking of a Katabolo, which Curtius identifies with Kastabala; and most travellers have tried hard to find a place suitable for Kastabala on the coast-line between Aigai and Issos. From its position, Hieropolis-Kastabala is a most important point on the ancient

main road from Anazarba to the defile, which is just across the Pyramos, behind the modern village of Osmanieh; it must, therefore, have been extremely important for Alexander to ascertain that no enemy from that direction was behind him, and from Hieropolis-Kastabala it was very easy to dispatch Parmenio to reconnoitre the defile through which the main road passed. From Kastabala, Alexander, having made sure of the country behind him, could safely drop down to the plains of Issos and commence operations. From the points brought to light by our inscriptions and the identification of the site of Hieropolis-Kastabala I think it may be safely argued that the two conjectural Kastabala, the one in Kappadokia and the one by the coast, did not exist, but that Hieropolis-Kastabala on the Pyramos was the only one of that name. It was second to none, not even to Anazarba, in size and strategical importance of the cities of Eastern Kilikia; it was noted for its worship of Artemis Parnasia, and was on the great main road which entered the mountain pass about ten miles away.

"Amongst our inscriptions from Hieropolis-Kastabala is one which gives us the name of a new Iambic poet, **ONESIKLES**, son of Diodoros, of whom I can find no other record; another was on a *stèle* put up to the honor of a man called *Neikolonnatos*, a curious name, suggestive at once of the above-mentioned long colonnade; and a long inscription in honor of one *Arzykios*, his wife and son, people of considerable importance in the town, and giving us information concerning the government of the place.

OTHER SITES.—"There are many other sites of towns to be identified in the neighborhood, but we did not find inscriptions to help us in doing so. On another spur, about four miles from Boudroum and at the edge of the plain, stood another ancient town, now called *Hemita Kaleh*. At *Kars Bazaar*, about ten miles to the north of Boudroum, extensive ruins are found on a gentle eminence above the *Savroon*, a tributary of the *Jeihan*. Everywhere are columns, architraves, traces of old buildings, tessellated pavements in the streets of the present village, *etc.* In a cottage we found a large tessellated pavement in good condition, in the centre of which a long Christian prayer was inserted in black tessera, stating that the pavement had been put down by the company of the fullers of the place. This spot must have been a great place in early Christian days; the building of the monastic establishment, now a mosque, cannot be later than 500 A. D. On no inscription could we find what had been the ancient name of the place, but two points tend to make me think it was *Flaviopolis*. Firstly, from coins we gather that *Flaviopolis* was on a river; and, secondly, it was the first station on the main road northward from Anazarba, the great rock-fortress which in Roman times was known as *Cæsarea penes Anazarbum*, and abounds in inscriptions which point to the consideration the place was held in during the days of the emperors."

KLAZOMENAI.—PAINTED SARCOPHAGI.—M. Pottier is publishing in the *Bull. de corr. hellén.* some interesting fragments of sarcophagi from Klazomenai purchased for the Louvre. They are related to those in the museum of Constantinople (*Rev. arch.*, 1883, i, 248) and those published in the *Antike Denkmäler* (1890, pl. 44-6). M. Pottier gives a careful study of the history of the white *engobe*, a very ancient technique in Greek ceramics and of which the funerary lekythoi were the last expression. There was a long battle between this process and that which consists in painting on the surface of the vase carefully polished.—*Revue arch.*, 1890, ii, p. 258.

KNIDOS.—Mr. Paton writes to S. Reinach that the fragments of *pithoi* with reliefs recently sent to Smyrna were discovered at Datcha, near Knidos; some pieces are preserved in the museum of the 'Αρχαιολογικόν at Smyr. Mr. Paton purchased at Datcha an entire *pithos* of the same type with geometric decoration and without figures, but was not able to export it.—*Revue arch.*, 1890, ii, p. 258.

KYME.—Dem. Baltazzi has announced to M. Reinach the discovery of two unfinished marble statuettes, which reproduce the type of the Apoxyomenos of Lysippos. They are headless but interesting as showing the process of ancient sculpture. At the same spot was found a sepulchral stelé of white marble with a gable and *akroteria* painted red and with the inscription Μένανδρος Ἀπολλωνίδου. Under the inscription were paintings of great interest, thus described: "On the side is a man in a short tunic, with bare knees and arms. In the centre of the stelé is a three-footed table, and by its side an indistinct object painted, like it, in ocre. The figure is polychromatic; the flesh has a real flesh tint."—*Revue arch.*, 1890, ii, p. 257; the *Νέα Σμύρνη*, 1890, ἀρ. 4095; *Athen. Mittheil.*, 1890, p. 353.

LYKIA.—Several inscriptions from Lykia have recently been published by MM. Berard, Colardean and Fougères in the *Bull. de corr. Hellén.* (t. xiv); and by M. Diamantaras in the *Athen. Mittheil.* (t. xiv, p. 412). Prof. Hirschfeld gives an interesting review in the *Berl. phil. Woch.* (1890, pp. 685, 717) on the second volume of the *Reisen in Lykien.*—*Revue arch.*, 1890, ii, p. 261.

MAGNESIA (on the Maiandros).—DISCOVERY OF THE NECROPOLIS.—M. Baltazzi has discovered the necropolis of Magnesia: it is composed of sarcophagi of calcareous stone and tombs of brick. Many had been anciently opened by treasure-seekers, but M. Baltazzi was able to collect a certain number of terracotta statuettes, which appear to be in a style analogous to those of Smyrna.

On the site of the theatre was also found a headless statue of Apollon, three-quarters life-size, a female head with painted eyebrows, and various fragments of architecture and sculpture.—*Revue arch.*, 1890, ii, p. 260.

ORIGIN OF THE WORSHIP OF DIONYSOS AT MAGNESIA.—S. Reinach communicated to the *Acad. des Inscriptions* (August 1) a Greek inscription found by D. Baltazzi at Magnesia. It is the legendary or historical account of the origins of the worship of Dionysos at Magnesia. A hurricane, says the text, having split open a plantain near the city, an image of Dionysos was found inside the tree. The inhabitants of Magnesia, who kept up regular relations with the sanctuary of Delphoi, sent to consult it. The Pythia gave out an oracle in fourteen hexameters, which has been preserved by the inscription: she ordered the Magnesians to build a temple to Dionysos and to send to Thebes for three Theban priestesses or Mainads—Kosko, Boubo and Thettalc—who organized at Magnesia three Dionysiac *thiasoi* or colleges. After their death they received public honors and were buried at different points of the Magnesian territory, which were called after them; one was buried near the theatre.—*Revue critique*, 1890, II, p. 112.

The inscription itself is published by Kontoleon in the *Athenische Mittheilungen*, 1890, pp. 330-2.

EXCAVATIONS BY THE GERMAN INSTITUTE.—The German School at Athens has obtained leave from the Turkish Government to excavate the ancient city of Magnesia on the Maiandros, famous for its temple of Artemis Leukophryne, a large part of the frieze belonging to which is preserved in the Louvre. The work is under the direction of Dr. Humann, who began excavations in December.—*Athenæum*, Sept. 20, Jan. 3.

MYRINA.—D. Baltazzi has discovered near Tsatli-dêrê, between Myrina and Grynion, a necropolis composed of tombs cut in the tufa and covered with slabs *en dos d'âne*; some are built of brick. Outside and inside the tombs were found fragments of terracotta.—*Revue arch.*, 1890, II, p. 257.

MYTILENE.—The *Néa Σμύρνη* (1890, *op.* 4096) reports that the collection of antiquities which belonged to the late governor of Mytilene, Fachri Bey, have been added to the museum of Constantinople. It consists of vases, terracottas, two sepulchral *stelæ* with reliefs, inscriptions, a small marble female head, a male head of natural size; also a liquid measure of beautiful workmanship, a marble metope, with an ox-head with *tania*, and half a marble torso of Eros.—*Athen. Mittheil.*, 1890, p. 353.

PAMPHYLIA.—The first volume of Count Lauckoronski's great work, *Les villes de la Pamphylie et de la Pisidie*, has appeared simultaneously in German and French. A review of this admirable publication will be given in a future number of the JOURNAL.

PATMOS.—CATALOGUE OF GREEK MANUSCRIPTS OF THE MONASTERY OF ST. JOHN.—A catalogue of the manuscripts in the monastery of St. John at Patmos, made by Sakkelion the learned ex-librarian of that body as much as thirty years ago, is now brought out at the expense of the "Par-

nassos" Philological society of Athens, with the title Πατριακή Βιβλιοθήκη (Athens: Papageorgios): it forms a handsome quarto with excellent paper and type. The catalogue itself contains a full account of the contents of each volume, of the size, approximate date and other features of the manuscripts, and of the illuminations of those which are thus embellished. The compiler's notes also display a satisfactory knowledge of the literature of the subject, and the plates at the end of the work supply specimens of the mode of writing employed in different centuries. Here the student will find an account of the famous *Codex N*, an uncial ms. of St. Mark's Gospel in silver letters on purple vellum of the sixth century, smaller fragments of which ms. exist, as Tischendorf discovered, in the Vatican, in the Vienna Library, and in the British Museum. Next in importance to this is the *Book of Job* of the seventh or eighth century, with its highly original illustrations; after which comes the Gregory Nazianzen of the tenth century. We should also notice—though M. Sakkellion does not seem to recognize their value—the two volumes of the sacred poems of Romanus, of which Dr. Krumbacher, who has copied them and proposes to publish them, says that they raise Romanus to the position of the first of hymn-writers. For the other valuable mss. which this library contains we must refer the reader to the catalogue itself.—*Academy*, Oct. 25.

SAMOS.—From Samos comes the news of the discovery, in the locality called Pountais, of a large sarcophagus, delicately sculptured in relief, and adorned with columns. Though the lid was entire and well preserved, nothing was found inside.—*Athenæum*, Aug. 30.

KYPROS.

KYPRIOTE INSCRIPTIONS.—Richard Mayer contributes to the *Berl. phil. Woch.*, 1890, No. 43, an article entitled *Κυπριακά*, in which he studies some of the inscriptions discovered by the Cyprus Exploration Fund and the sepulchral monuments to which they relate. He connects two of them which belong to the same family; that of Onasagoras, son of Stasagoras, and that of Timovanassa, his wife, who died almost at the same time and were mourned together by their father.

EUROPE.

THE HIDING OF ANCIENT STATUES.—E. le Blant read before the *Acad. des Inscriptions* (Sept. 26) a memoir *Sur trois statues cachées par les anciens*. Three of the most beautiful of ancient statues that have been preserved were discovered where they had been anciently hidden: the Venus of the Capitol, in a wall of the Suburra; the Aphrodite of Melos, in a narrow cell near a rampart; the colossal gilt-bronze Mastaï Hercules, in a walled

trench carefully dug, eight metres below the surface. This is not a matter of chance. Many texts, quoted by M. le Blant, prove that the idols were thus purposely hidden by the pagans, on the triumph of Christianity, in order to save them from destruction. This care was taken because they considered the triumph of Christianity to be but momentary, and hoped for the reëstablishment of the ancient worship; which would take place, according to one prediction current among them, at the end of 365 years. In this care to hide the idols the Christians saw the accomplishment of the prophesy of Isaiah: *Abcondent Deos suos in speluncis et cavernis petrarum, neque ibi celabunt eos*. Often, in confirmation of this text, the hiding-places were discovered and the images were either destroyed or used as simple works of art for the decoration of public buildings.—*Revue crit.*, 1890, II, p. 211.

HISTORY OF THE CAT.—An interesting discussion has taken place at the *Académie des Inscriptions* (June 14 and July 11) on the subject of the history and domesticity of the cat. M. Arbois de Jubainville began the discussion by referring to a Gallic coin of Lisieux with the inscription *cattos* or the cat. This caused M. Gaston Paris to remark that according to present opinion, backed by clear proof, the domestic cat first appeared in Europe only toward the fourth century of our era: before that it was wild, and tame only in Egypt. The word *cattos* only then began to be used to designate the domestic cat: the existence of this word in Gallie before the Roman conquest would be remarkable. M. Maspero said that the Egyptian cat was of a totally different species from our domestic cat, and of different origin: it was really not domesticated but half-tamed or captive as in a menagerie. At a following meeting M. Saglio brought forward a number of ancient monuments to prove the existence of the domestic cat: (1) paintings in the Etruscan tombs where cats are seen in the houses, especially in one case where, during a banquet, it is playing under the couches with a hen and a tame partridge. (2) Two hydriae of the v cent. B. C. in the British Museum, where tame cats are given in a music-school; one in leash, another on a stool while a youth offers it a cake. (3) A vase-cover in the Berlin Museum in which mice are being chased by men and cats, who, seeing some milk-cans, are side-tracked. (4) A basrelief in the Capitoline museum, where a trained cat is represented dancing to the lyre.—*Revue crit.*, 1890, I, p. 60. [The most complete historical study of the cat, especially as the successor of the weasel, is given by Dr. PLACZEC in the *Transactions of the Soc. of Biblical archaeology*, vol. IX, 1, under the title *The weasel and the cat in ancient times*.—A. L. F., JR.]

GREECE.

THE PELASGIANS AS CARRIERS OF THE MYKENAÏAN CIVILIZATION.—Already Milchhöfer, in his book *Die Anfänge der Kunst in Griechenland* published

in 1883, had pronounced in favor of the Pelasgians as the carriers of the Mykenian civilization. Lately, on the ground of the discoveries at Vaphio, Trendelenburg has expressed (*Kölnische Zeitung*) the same opinion, and his views are summarized in the *Berl. phil. Woch.* of Sept. 27 (No. 39, 1890).

The division between Hellenes and barbarians did not exist in the second half of the second millennium B. C., when Mykenai flourished, so that the two opposite opinions as to the *origin* of this art have no ground for existence. As for its *relation* to contemporary artistic developments, this is being proved for the Phrygians, Lydians, Karians, Egyptians, Babylonians, and "Hittites," the Assyrian development being too late to have any influence. But, notwithstanding these relations, its *character* is very definite and original, especially in architecture and decoration, and it never abdicated its originality. The *location* of this art, as far as present discoveries are concerned, is in a very restricted and well-defined territory, on the eastern coast of Greece. Lakonika, Argolis, Attika, Boiotia, and Thessaly are the provinces where the domical tombs and the small antiquities of "Mykenian" art have been found. Connected with this stretch of coast and ending with Thessaly as its northern centre is a people regarded by Greeks of all times as the original inhabitants of the land and a people with great artistic gifts—the *Pelasgians*. For a long time the confusion in which the Pelasgians were involved, the apparently contradictory assertions anciently made regarding them, their almost omnipresence, have made the question of their individuality one to be avoided. But, of late, definite proofs have been accumulating which are enabling us to realize the ethnologic individuality of the Pelasgic people. *First*: it was an old Athenian tradition that their walls were built by the Pelasgians: the excavations on the Akropolis have disclosed fortifications and a palace of the same type as those of Tiryns and Mykenai, which must consequently also be attributed to them. *Second*: the cult of demons of the lower world as connected with that of the dead was a characteristic of the Pelasgian religion: the most prominent feature in the domical tombs is the great hall devoted to the cult of the dead. *Third*: the yoking of oxen is said to have been an invention of the Pelasgians; and the taming of bulls is represented in the fresco at Tiryns and in the gold cups at Vaphio. Such facts can hardly be coincidences, and are to be added to the presumption afforded (*a*) by the territorial identity and (*b*) by the fact that the Asiatic relations alluded to above are explained from the possession by the Pelasgians of a large part of the Asiatic western coast and their consequent connections with the Lydians, Phrygians, and Karians.

The rich Pelasgian culture was brought to an end by emigrations: the cities were captured, the palaces burned, the tombs destroyed, and the artistic inhabitants were forced to become rude warriors; and with the introduction of another and a conquering race new artistic conditions arose.

NOTES ON WHITE LEKYTHOI.—Jan Six has published two fine white *lekythoi* at Bonn. One of these is especially interesting as it represents a *stelê* surmounted by the statue of an *ephebos*; it is one of the rare certain examples of the use of sepulchral statues in the fifth cent. B. C. Another *lekythos* recently found at Eretria has a painting, in the most exquisite Attic style, of an armed youth before a seated woman. On a second Eretrian *lekythos* is a *stelê*, surmounted by a stepped pyramid, which reminds Mr. Weisshäupl of the Mausoleum of Halikarnassos. It is a proof that this architectural type, which has been considered Asiatic, was current in Attika as early as the middle of the fifth century B. C.—*Revue arch.*, 1890, II, p. 234.

ATHENS.—THE DISCOVERY OF ARISTOTLE'S CONSTITUTION OF ATHENS.—Professor Louis Dyer writes from London (Jan. 19) to the N. Y. *Evening Post* (of Feb. 5, 1891) concerning the discovery just made among a mass of papyrus-rolls recently acquired by the British Museum. "This is nothing less than the almost complete text of Aristotle's 'Description of the Constitution of Athens,' the opening being missing, and the concluding portion badly mutilated. Apparently nothing could so well be spared as these missing portions, and certainly no part of Aristotle's collection of 158 constitutions could be more welcome than its first and most important chapter. Even those few who have thought that antiquity was wrong in attributing this work to Aristotle, will recognize the epoch-making importance of such an addition to our means of knowing Athenian constitutional history at first hand. Here we have an authority freely used by Plutarch, by Pollux, and by Harpokration as well as by many others, whose works have hitherto been our only possible source of information about vital questions concerning ancient Greek institutions. Facsimile reproductions of this newly found text will soon be published, and meanwhile it has been printed by order of the trustees of the British Museum, and will shortly appear with accompanying introduction and notes by Mr. Kenyon of the Department of Manuscripts.

"As for evidences of its genuineness, they appear to be abundantly forthcoming. When the rolls in question were acquired, neither of the parties to the transaction had the least idea that a treatise by Aristotle was involved: a careful examination of the newly found text yields apparently such internal evidence as to be absolutely conclusive. Of the fifty-eight citations from Aristotle's description of the Constitution of Athens definitely known in various ancient writers, fifty-five 'occur with appropriate context in the text of the papyrus now in the British Museum.' The absence of two out of the remaining three results from their occurrence at the beginning and the end respectively of the treatise, which fact precludes the possibility of finding them in this version, where the for-

mer is lacking and the latter is mutilated. One passage only of the fifty-eight in question remains still undiscovered in the papyrus-rolls just deciphered, or rather the corresponding passage there found presents serious discrepancies when confronted with it. There are besides thirty-three other quotations which have been more or less conjecturally supposed to belong to that work. Of these all but ten occur on the newly-found papyrus, and of the missing ten some probably have been wrongly connected with it, and others possibly are from its missing beginning or its mutilated end. Confirmation of the genuineness of the version written upon these papyrus-rolls, and also further proof of the authenticity of the two papyrus-fragments at Berlin, is found in the appearance of the contents of both these fragments upon the newly deciphered text. The approximate date of the new text can be known to any one who is competent to read the accounts of a private estate in Egypt, dated month by month in the eleventh year of Vespasian, which occupy what is technically called the *recto* of the British Museum papyrus. The text of Aristotle, written on the *verso* in four distinct hands, agrees with these accounts in certain minutely characteristic points, such as remarkable forms of letters and abbreviations. The date, then, is later than the eleventh year of Vespasian, and as early as accounts belonging to that year can supposably have lost their importance, say 95-100 A. D. Needed light is thrown upon the hitherto obscure nature of the legislation of Drakon, and the position of Solon and Peisistratos with regard to the development of Athenian democracy becomes more clear. Detailed information on all these points will be gathered from the forthcoming publication."

RECENT EXCAVATIONS.—Two excavations have been carried on by the Archaeological Society, during the past summer, within the walls of Athens; the first under the direction of Koumanoudes in the centre of the old city near the Tower of the Winds, the second, under Mylonas, to the west of the Dipylon near the church of Hagia Triada, below the monument of Dionysos.

I. Roman House and Stoa.—Between the Tower of the Winds and the Roman marketplace the Government had purchased, years ago, a large private house in order to excavate an ancient construction whose columns were still standing in this house and its neighborhood. Already a large portion of a remarkably well-preserved Roman house has been uncovered, which, from its position, form, and the indications of some inscriptions that were found, must have formed a part of the Roman marketplace. There is a space paved with marble slabs and surrounded by columned halls. These halls have been found on the east and south sides. The majority of the marble Ionic columns are still standing; only a few are entirely wanting. To the outside of the halls is attached a row of chambers which appear to have been used as shops. On the south some of these

chambers seem to have been destroyed in ancient times and replaced by a second columned hall. How far the market extended to the west and north is not yet ascertained. Eight columns of the eastern and thirteen of the southern hall have been found without reaching the end. Apparently, the market extended to the west as far as the gate erected at the expense of Julius Caesar and Augustus, and dedicated to Athena Archegetis. The expectation that the Tower of the Winds was included in the Roman market has been disappointed; it lies outside and on a higher level. But it was placed in direct communication with the market by a three-gated Propylæon which has been found in good preservation, and on the axis of the gate of Athena Archegetis. This gate may be the main entrance to the market.

The better delimitation of the site of the Roman market is of the greatest importance for the topography and history of Athens. The old Greek market of Athens, which was in the Agora of the Peisistratidæ, lay probably at the western foot of the hill of the Theseion. In the course of centuries, it was continually enlarged toward the only side where such enlargement was possible. In the Hellenistic period, Attalos II made a new square with a large columned hall to the east of the old Agora. Finally, in the time of Augustus, the great Roman market was erected with the gate of Athena Archegetis. Even later, Hadrian erected, a little to the N. E., the large building, which was excavated a few years ago, and closed the series of the buildings and squares belonging to the market.

Professor G. Aitchison writes, on Nov. 8, to the *Builder* (Nov. 22) in regard to these excavations in the Roman market. He describes the columns as having Attic bases, the lower torus resting on the pavement without a plinth and with shafts of Hymethian marble from 14 ft. to 16 ft. high from the pavement, including the bases. Beyond the peristyle is a space, southward, of 19 ft. 6 in., and then comes the chamber with three doorways and a pronaos with two columns. Plans and drawings accompany Prof. Aitchison's letter.

II. *Near the Dipylon.*—The Archaeological Society carried on excavations at several points in front of the main gate of the ancient city, the Dipylon. The old fortified walls and constructions already uncovered have been cleared, and the later walls on the banks of the Eridanos have been removed. The arrangement of the constructions to regulate the outflow of the Eridanos from the city have thus become visible, but the form of the river-bed is no longer as clear. Then excavations were started between the Dipylon and the church of Hagia Triada, and at a very great depth there were found walls of very different constructions and ages, and of a use still unknown, nor will it be known until the entire square is excavated. Further excavations are being carried on to the west of the

church in the burial-square that has already yielded so many tombs: Mylonas is digging to the west of the main street of tombs, and has found already on the rising ground a large number of ancient tombs. They are arranged in terraces and belong to various periods. Some are of quarried stones with mortar, others of irregular marble slabs, others of roofing-tiles; and they appear to belong for the greater part to poor people. Among the discoveries, two inscriptions are of topographic interest, as they mention Artemis Soteira; one being a decree, the other a dedication. The temple of the goddess was probably in this neighborhood. Mylonas has called attention to the fact that Pausanias (i. 29. 2) mentions a sanctuary of Artemis not far from the Dipylon on the road to the Academy.—*Athen. Mittheil.*, 1890, pp. 343-6.

TOMBS NEAR THE GERMAN INSTITUTE.—In digging the foundations of the new houses which Dr. Schliemann was expecting to erect s. w. of the buildings of the German Institute on the corner of the ὁδὸς Παγεπιστημίου and the ὁδὸς Πανακωτίων, a large group of tombs have come to light. They are of different kinds; some being constructed of large flat bricks, others of large marble slabs. Two fragmentary inscriptions were found. One of the graves contained about twenty small *lekythoi*, one of which (23 cent. high) had a painting, on a yellow ground, of a man in Oriental costume riding on a camel: this representation resembles closely the middle figure of the Müller-Wieseler vase (ii, pl. 38, 447) except that it is turned to the left. A badly-injured inscription to the left of the rider's head seems to read Καλὸς Μίκων. Several other *lekythoi* in this tomb are painted with figures: one of similar technique has a running woman; a third has red figures of a running youth as well as a running woman. At the same time a small grave was found in the rock, containing a heap of terracottas and *lekythoi*. Some of these objects were very early: there were three archaic female seated figures with right hand on breast, with traces of white and red; two stiff standing female figures with hood, a chiton, and holding a bird in lowered left hand and an uncertain object in their right. The fifteen small *lekythoi* are not red- but black-figured. Among other finds, the most remarkable are the remains of a beautiful red-figured *lutrophoros*. The part preserved shows a monument painted white, and, by its side, a white horse upon a similarly colored low plinth with a youth in a richly embroidered chiton, while behind him stand other youths. In the rider we recognize the deceased, and this makes this vase unique among red-figured *lutrophoroi*.—*Athen. Mittheil.*, 1890, pp. 347-8.

SCULPTURE.—One of the recently-found sepulchral monuments is of unusual interest. It belongs to the fourth century B.C. The subject is in high relief and consists of a girl walking to the right, raising her left hand in adoration and holding a small vase in her lowered right hand.

The relief measures 1.72 met. in height by 0.75 in breadth. There was also a remarkable slender three-sided base on which lies a pomegranate. Both monuments were found upright in their original position on the site mentioned above, near the Dipylon.—*Athen. Mittheil.*, 1890, p. 346; *Athenæum*, Aug. 30.

STONE SARCOPHAGI.—In digging the foundations of the new houses Dr. Schliemann is building at Athens, near the Arsakeion, four stone sarcophagi of late date have been found, with remains of bones of the deceased.—*Athenæum*, Sept. 20.

PRE-PERIKLEAN INSCRIPTION.—Dr. Lolling has published in the new Greek periodical *Athena* numerous fragments of a most important pre-Periklean Attic inscription on the ancient measure *hekatompodon* found in one of the lowest strata of the Akropolis.—*Athenæum*, Nov. 22.

THE PROTECTION OF SCULPTURES ON THE AKROPOLIS.—We quote some suggestions from a letter written from Athens to the *Builder* (Nov. 22) by Professor G. Aitchison: "As regards the Akropolis, it is to be regretted that sculptural fragments are left exposed to the air. Some pieces that have been from their position protected from the weather have the carving almost perfect, and some of the coffers have the most distinct traces on them of the patterns that were painted or gilt. The *Panathenaic* frieze that still exists on the wall of the opisthodomos of the Parthenon is exposed to the weather, the coffering having fallen. A temporary roof would not only protect the sculpture, but also restore the original effect, as it was lit from reflected light from below. The same remarks apply to the portico of the temple of *Athena Polias*, the doorway of which is exposed. It also is to be regretted that a copy of the sculptures on the temple of *Nike Apteros* is not substituted for the real sculpture and the actual pieces placed in the museum. As we owe the re-erection of this temple to the munificence of Dr. Schliemann, he would hardly object to the preservation of the actual sculpture. The remarks about a temporary roof between the columns and the walls of the naos equally apply to the Temple of *Theseus*. No care is bestowed on the remains of *Jupiter Olympius*. The boys who play about these ruins amuse themselves with breaking off pieces of the fluting, as many of the fractures are quite new. The volutes from the fallen columns have disappeared, and the sculpture of the capitals will soon be destroyed."

GENERAL NOTES.—M. Lambros writes: "An interesting epigraphic discovery was made on October 6th at the Dipylon—that of an inscription of forty-two lines, belonging to the middle of the second century B. C. It is an honorary *psephisma* of the community of the *Sotereustai* in honor of one Diodoros, the son of Sokrates, of the Attic Aphidnai. The point in question is the holy precinct of Artemis Soteira, the position of which is unknown. It was situated probably not far from the spot where the in-

scription was found. But it is to be noted that it was not discovered *in situ*. M. Mylonas, the superintendent of the excavations at the Dipylon, promises to print this inscription in the next part of the Athens *Ephemeris*. These excavations are pretty nigh their termination. The question of the church of the Holy Trinity is not yet settled. A sum of 5,000 drachma has been offered by the Archæological Society to pay the cost of replacing the church which is to be pulled down by another on a new site. The Consistory, however, insists that the new church shall be built before the old one is destroyed. To this the Council of the Archæological Society is not disposed to agree. Since the workmen have arrived from Venice the Minister of Public Worship has formed a committee to decide on the method of repairing the mosaics at the convent of Daphni. It is decided to take to pieces the mosaic figure of Christ in the cupola. The new Director of the National Collection of Coins has, in rearranging them, discovered many that were supposed to have been stolen. It seems likely that the loss entailed by the theft will turn out to be inconsiderable. The collection of mss. in the National Library (over 1800 in number) will soon be deposited in the Academy building, where the cabinet of coins is lodged.—*Athenæum*, Nov. 1; Dec. 27.

PROGRAM OF THE GERMAN ARCHÆOLOGICAL INSTITUTE.—At Athens, the fortnightly meetings of the Institute will begin Dec. 10, and continue till Easter. During the same period, Dr. Dörpfeld will give his usual *in situ* demonstrations on the buildings and topography of Athens, adding Peiræus and Eleusis. Herr Wolters (second secretary) will hold practice-classes in the examination of antiquities in the museum at Athens. In April, an expedition through the Peloponnesos will be conducted under the personal supervision of Dr. Dörpfeld, and a further journey for the examination of the sites of Pergamon, Troy, and some other places to be fixed later.—*Builder*, Oct. 25.

FRENCH SCHOOL.—M. THÉOPHILE HOMOLLE, known for his works on Delos, has been appointed successor to M. Foucart as Director of the French School at Athens.—*Athenæum*, Jan. 3, 1891.

M. LECHAT, member of the French School at Athens, has been recommended to the *Société Centrale des Architectes* for the medal conferred annually by that society on the author of some archæological work. M. Lechat's titles to it consist in his excavations at Corfou and his studies on the archaic sculptures of the Athenian akropolis.—*Revue crit.*, 1890, I, p. 439.

ITALIAN SCHOOL.—The Greek press announces that the Italian Government has received a grant of land near the military hospital in Athens for the purpose of building an archæological school.—*Athenæum*, Sept. 13.

ITALIAN VASES SOLD AS GREEK.—Mr. Stillman writes from Rome: "It may not be out of place to warn the archæological public that a well-

known Greek dealer in antiquities is now buying vases of Nola or any other fabrique of Magna Græcia, of which there are great quantities now in the market here, coming from the excavations at Falerii, Capua, etc., and shipping them off to Athens, where they will be sold as Attic. Considering that the mere fact of Attic *provenance* increases to double or threefold the value of an antique vase, and that our market is flooded with Nola ware, the delusion of purchasers at Athens is likely to be extensive, the more as very few vases in good condition are found in Greece, and those mostly rigidly watched by the Greek archaeological police. A good judge would hardly mistake a Nola vase for one of Attic execution, but the majority of buyers would easily be deceived, finding the former in Athens."—*Athenæum*, Oct. 25.

DAPHNION.—MONOGRAPH ON THE MONASTERY.—A monograph on the ancient monastery of Daphni has recently been published by M. Lambakes, entitled *Χριστιανική Ἀρχαιολογία τῆς Μόνης Δαφνίου* (Athens: Papageorgios.) In this the history of the structure is traced from the thirteenth century, when the first authentic records of its existence occur, to the present day; and the author narrates in some detail the disasters to which it has recently been exposed from shocks of earthquakes and from vandalism. The most important portion of the book is that which relates to the church, and especially to its mosaics. These are elaborately described and illustrated by woodcuts, and the architecture and decorations are compared with those that are found in various other Christian buildings. There is also a carefully drawn plan of the church. The expenses involved in the publication of the monograph were guaranteed by the Marquis of Bute.—*Athenæum*, Oct. 25.

RESTORATION OF THE CHURCH AND MOSAICS.—M. Lambros writes from Athens: "The works at the monastery of Daphni are making progress since the arrival of Salviati's workmen. The mosaics of the cupola have been removed with great care, after they had been properly drawn and numbered. The cupola is now to be repaired, and thereafter the mosaics will be restored to their original position. All that is missing will be replaced by painting."—*Athenæum*, Dec. 27.

DELOS.—THE EARLIEST EXCAVATIONS.—In view of the lack of appreciation which his efforts have met, M. Lebègue, who made in 1873 the first excavations at Delos, writes to the *Revue archéologique*, (Sept.-Oct., 1890, p. 172) to set matters in their proper light. He went to Delos for the purpose of studying the oracular cave on the summit of the Kynthos, and was able to prove it to have been an oracle or *adyton* of Apollon. Having only 2,000 francs, he was able, beside this, to excavate only the temple of Zeus Kynthios, near the grotto. On his return, he not only published a book on Delos, in which the sites of the various ruins were indicated, but

worked hard to excite an interest in the continuation of the work. He gave to the French School at Athens 1,400 francs, by means of which it became possible for M. Homolle to start the excavations which were so successfully conducted by the members of the French School.

INVENTORIES OF THE TEMPLES.—M. Homolle has reproduced, transcribed, and commented, in the *Bulletin de corresp. hellénique* (vol. XIV), one of the longest Greek inscriptions known—the accounts and inventories of the temples of Delos in the year 279 B. C. The author shows marvellous ability in his commentary which teems with valuable information on questions of Greek public and private life which are illustrated by this inscription. Details are given in our summary of the *Bulletin*.

THE INSCRIPTION ON THE STATUE OF ARCHERMOS.—C. Robert gives a restoration of the inscription on the base of the statue of Archermos which Reinach considers preferable to those of Lolling and Six. It reads: Μικκιάδης τὸδ' ἀγάλμα καλόν, ἐργασμένον εἰσὶν Ἀρχέρμου σοφίῃσιν, ἐχρηόλα δέξαι ἀναστὰ τῷ χίρ, Μέλανος πατρίων δῶρον λατόντι. According to this interpretation the statue was carved by Archermos and given by Mikkiades.—*Revue arch.*, 1890, II, p. 247.

KORINTHOS (near).—**PREHISTORIC TUMULI.**—P. Kastromenos (Dr. Schliemann's brother-in-law) has discovered on the Isthmus of Corinth two prehistoric tumuli, which he believes to be identical with the tombs of Sisyphos and of Neleus, father of Nestor, of which Pausanias speaks in his description of the territory of Corinth.—*Athenæum*, Oct. 25.

LYKOSOURA.—The heavy fragments of the statues of the great group by Damophon found last year at the temple of Despoina are still obliged to wait on the slopes of Mount Lykaon till a road can be made to bring them down. The heads are now temporarily mounted in the National Museum at Athens. A complete restoration of the group will hardly be possible.

The excavations have brought to light the whole plan of the temple, with many architectonic fragments, slabs of marble pavement, roofing-tiles, &c. At the distance of a few metres from the south façade were discovered the foundations of the portico described by Pausanias.—*Athen.*, Dec. 6, 20.

MANTINEIA.—**REPORT ON THE EXCAVATIONS.**—M. Fougères is publishing in the *Bull. de corr. hellén.*, t. XIV, his official report on the excavations carried on by the French School at Mantinea in 1887 and 1888, accompanied by plans of the ancient city, the theatre, and the agora. An abstract of this important Report will be found in our summary of the *Bulletin*.

MEGALOPOLIS.—**EXCAVATIONS RENEWED.**—The excavations of the British School at Megalopolis, which led last spring to the discovery of the very important remains of the stage-buildings referred to in the *Athenæum* of August 2, have now been resumed. The Greek Government is resolved

that the whole theatre shall be cleared and kept, like that of Epidauros, as an attraction to the student and the tourist. It is true that the upper rows of seats are probably entirely destroyed, and that this theatre cannot, even when perfect, have shown that wonderful symmetry and beauty of proportion which distinguish the design of Polykleitos at Epidauros. But this will in a great degree be compensated for by the unique interest of the stage at Megalopolis, with its broad flight of steps down to the orchestra along the whole front. The conditions of the excavation have now been satisfactorily arranged, and the completion of the work it has begun has been definitely undertaken by the British School.

Pending this arrangement, it was resolved to continue the exploratory excavation of the Agora, upon the opposite bank of the river. They were able to follow out the plan of a large stoa which seems to bound the Agora on the north—the position, according to Pausanias, of the Stoa Philippios—for a distance of about 500 ft.; and another building to the southeast seems also to be a stoa. If these can only be identified with the buildings mentioned by Pausanias, there will soon be no difficulty in tracing the whole plan of the Agora as he describes it.—E. A. GARDNER, in *Athen.*, Dec. 6.

MYKENAI.—EXCAVATIONS ON THE AKROPOLIS.—The excavations of the Greek Archæological Society on the akropolis at Mykenai have been rewarded by the discovery, near the wall within the enclosure, of some sixty different objects of antiquity, amongst which are seven bronze swords, seven knives, four hatchets, a razor, a round mirror, an earring, and some gold ornaments. The swords vary in type from the others found in the prehistoric tombs of Mykenai, but are like other bronze and iron swords found in somewhat later tombs of Attika and Lakonika.—*Berl. phil. Woch.*, 1890, No. 46; *Athenæum*, Oct. 18.

PEIRÆIEUS.—INSCRIPTIONS.—In the court of a house near the railway bridge is the fragment of a memorial column built into the wall, bearing a four-line inscription: Διόλοχος με ἐτίκνωσε | Φιλουμένη ἐξανέφηγε | θρέψε Προκόννητος τοῦ | νομα Μητρόβιος. The words were cut at an early date with a sharp tool, and each line of verse is separated from the next by an engraved line, there being also a line to head and to conclude the inscription.

To the north of Peiraieus, and by the road leading to the Phaleron, has been found the upper part of another memorial column, upon which is a basrelief, of which one can see the head of a woman turned toward the left: above is the inscription: Ἐπίτασις Ἔργο | χάρον | Μιλήσια. In the court of a house by the west slope of the Mounichian hill is a baseless funeral urn of white stone 51 cm. high. On it is represented a bearded man, sitting on a seat with a back and a footstool, holding out his hand to another man standing before him. From the recess between the two appears a woman. The accompanying inscription is Φάλλος Ἡγησικρά-

της. The name Φάλλος is not to be found in Pape's lexicon, though Φάλλος is given, as that of an ancient writer of Athenian comedy.—*Athenæum*, Sept. 13.

RHAMNOUS.—DISCOVERY OF SCULPTURES IN THE TEMPLES OF NEMESIS AND THEMIS.—The ruins of the ancient Rhamnous lie at a distance of about nine miles to the northeast of Marathon. Since the Middle Ages it has been known under the name of Ovrío Kastro, and on the spot stands an ancient fort overlooking the sea. The site of the Deme of the same name, to which the orator Antiphon belonged, appears to be somewhat further off. Near the castle, on a low projecting hill, lie the ruins of two temples; eight columns of the larger of these are still standing. Of late the opinion has prevailed that the two temples were dedicated to one and the same deity, Nemesis. The older and smaller (10.70 met. long by 6.40 wide) was burnt by the Persians during the invasion of Xerxes, and it was replaced by a larger building (22.90 m. long by 11.30 wide), and in it was erected a statue of the goddess by Pheidias or his pupil Agorakritos. According to Pausanias, the statue was hewn out of a block of marble that the Persians brought with them from Paros to Marathon in order to erect a trophy of the victory they made sure of earning. But the later temple, as the absence of fluting on the columns seems to indicate, was never completed. Leake says in his work on the Attic Demes that in the ruins of the smaller temple was found a fragment of a headless and armless statue of life size, the close-fitting drapery of which was in the style of the Æginetan school. He considered it to be a portion of a statue of Themis, to whom the temple was at that time supposed to be dedicated: a statue is now, he says, in the British Museum. Besides, Col. Leake mentions as existing in the larger temple fragments of a colossal statue, which, according to Hesychios and Zenobios, was a statue of Nemesis. He remarks that they are not of Parian marble as Pausanias reported. He also mentions various fragments and figures in high relief, which he supposes belonged to the base of the colossal image.

The Athenian Society of Archaeology has been making excavations at Rhamnous under the superintendence of the Inspector of Antiquities, M. Stais. The main object has been to clear the precincts of the temples, especially of the later one. In doing so a number of interesting fragments of sculpture have been found, among them a horse of stone, three female heads, and one male head. Two statues in the form of *Hermæ*, and of a later period, have come to light, and the pedestal of one bears an inscription. All of these objects have been transported to the Central Museum at Athens. As yet, to judge by the brief list published, no part of the statue of Nemesis has been found. How are the fragments that have come to light to be explained? Pausanias describes the figures of

the *bathron* of the statue of Nemesis. According to one myth, Helen was the daughter of Nemesis, but Leda suckled her, and Pheidias represented Leda taking Helen to Nemesis. Tyndareos was depicted standing by with his sons, and a horseman named Hippeus was present with his steed. These figures Pausanias says were ἐν τῇ βάθρῳ τοῦ ἀγάλματος εἰσκαρπύεα, but whether in relief he does not say. Were the figures by some exception in the round? Is the stone horse possibly the horse of Hippeus; and do the heads belong to the personages mentioned by Pausanias? If they were, we have recovered portions of the work of the great master or his school.

It is intended to excavate the sacred way leading from the temple to the sea, which was adorned on either side with bas-reliefs and statues, of which many remains are still *in situ*, so that the work of excavation promises to be of high interest. For the moment the excavations are stopped, and next year operations will begin with the excavation of the *via sacra*.

The main result of the excavations is, that we must give up talking of two temples of Nemesis, an old and a new one. The discovery of the statue of Themis in the smaller temple appears to have settled the point. In spite of the inscriptions on a marble seat that have long been known, "Sostratos dedicated to Nemesis," and "Sostratos dedicated to Themis," the old opinion, adopted by Leake, that the smaller temple was dedicated to Themis, had been abandoned, and the theory I have mentioned above adopted; but the discovery of the statue of Themis proves that she was worshipped in the smaller temple. Only one point of importance remains to be decided, whether Themis was the sole divinity of the temple, or whether she and Nemesis were worshipped together, and she was a goddess σένναος. This has been settled, at any rate for later times, by the inscriptions to be mentioned below. The statue of Themis is one of the loveliest in the Central Museum. It is 2.30 met. high. The inspiration of true Attic art characterizes the beautifully draped limbs of the figure. With the exception of the hands, which are lacking, the work is in a fine state of preservation. The pedestal on which it stood names, as the artist, a hitherto unknown CHAIRESTRATOS, the son of Charedemos of Rhamnous. From the same inscription we learn that the statue was dedicated by a citizen of Rhamnous, Megakles the son of Megakles, in celebration of a victory he had won as a gymnasiarch of contests of men and boys and as choragos in the theatre. The inscription runs: Μεγακλῆς Μεγακλέους Ῥαμνοῦσιος ἀνέθηκε Θέμιδι στεφανυθείς ὑπὸ τῶν δημοτῶν δικαιοσύνης ἕνεκα ἐπὶ ἱερείας Καλλίστου νεώστας παιδὶ καὶ ἀνδράσι γυμνασιάρχῳ καὶ κορυμβοῖς χορηγῶν | Χαίρεστρατος Χαρεδήμων Ῥαμνοῦσιος ἐπόησε. It is to be remarked that on the plinth, beneath the work ἱερείας of the second line, the words καὶ Φειδοστράτης Νεμείστως ἱερείας have been added subsequently. The

second statue found represents the priestess Aristonoë, and its style as well as the characters of its inscription assign it to the time of Alexander. The inscription on the statue of Aristonoë is as follows: Θέμιδι καὶ Νεμέσει Ἱεροκλῆς Ἱεροποιοῦ Παμνούσιος ἀνέθηκε τὴν μητέρα Ἀριστονόην Νικοκράτου Παμνονοῖον ἱέρειαν Νεμέσεως.

Besides the two statues mentioned above, a third has been found belonging to the smaller temple. The lettering of the inscription and the artistic character of the statue indicate the fifth century. It is dedicated to "the goddess," but it is not stated which. The statue represents a young man with his breast bare. It is a portrait of ordinary and yet beautiful workmanship. It is about one metre high. That of Aristonoë is much larger, but not particularly beautiful. In the right hand, which was found broken off, is a *patera*.

The pedestals of all three statues were discovered *in situ* in the south-west corner of the smaller temple. That the temple existed down to Roman times is proved by the discovery of thirteen imperial coins. Besides, in the same grave before the pedestals were discovered thirty clay lamps.

Not less interesting are the fragments, found in the ruins of the larger temple, of the image of Nemesis, which was of Parian marble. Of the image itself only the shoulder remains. The figures belong to the pedestal. They are now on view at the Central Museum and are in high relief, so that there can be no doubt that they belong to the *bathron*. They are small and of very short stature: they remind one of beautiful terracotta figurines. The most important are the two female heads, the male head, a male torso and two female torsos, and the head of the horse.—SP. LAMBROS, in *Athenæum*, Oct. 25.

Mr. E. A. GARDNER says of the sculptures, in the *Athenæum* of Dec. 6: "The two female statues from Rhamnous have now been mounted upon their bases and exhibited in the vestibule of the National Museum at Athens. The fourth-century statue is a typical specimen of the inferior and more mechanical style of its period. The modelling is hard, and the forms of the body especially are lacking in grace and delicacy; but at the same time it possesses a certain simplicity and dignity of style which one could not assign to a later period, even if the inscription did not place its age beyond a doubt. The other statue is an ordinary specimen of Hellenistic work; but there is a grace about the proportions and the draping of the himation, which envelopes the whole body, that may to many be more attractive than the severer character of its companion."

Dr. WOLTERS comments upon these sculptures in the *Athenische Mittheilungen*, 1890, pp. 349-50. The reliefs he attributes with certainty to the base of the statue of Nemesis by Agorakritos and also identifies the horse's head with the horse of Ἰππεύς. The composition is formed of

a row of well-separated figures, moving slowly forward; in style it is before everything comparable to the frieze of the Parthenon, but the style of Agorakritos appears to be already slightly more developed. The matronly statue of Themis by Chairestratos has traces of color on its himation: the pattern being the common tooth-ornament. The inscription shows that the work cannot be dated before 300 B. C. The second statue, that of Aristonoe, was dedicated by her son Hierokles. The third statue, of the youth, with himation wrapped around the lower part of his body and with right arm raised, was dedicated by Lysikleides, and must belong to the close of the fifth century B. C. Among the few archaic remains is a seated female figure 45 cent. high, related to the similar figures found on the Akropolis: the head and arms are wanting. Of a very beautifully executed group only the lower part remains; other pieces are several hermæ, a small figure 42 cent. high of severe style, and a fragment of relief with several figures including a nude youth with high basket-like head gear.

SPARTA (near).—TEMPLE OF THE AMYKLAIAN APOLLON.—The *Ἐφημερίς ἀρχαιολογική* describes some excavations undertaken by the Greek Archaeological Society under Tsountas' direction on the hill of *ἀγία κεριακή*, an hour to the south of Sparta. Among the discoveries are about 15 fragments of terracotta slabs which bear more or less letters of the inscription *Ἀπόλλωνος ἐν Ἀμυκλαίῃς*. This is the confirmation of Leake's conjecture that here was the site of the sanctuary of the Amyklaian Apollon. On the west side and partly also on the south side of the hill there remains the surrounding wall built in isodomic fashion with large blocks. In the middle of the space enclosed, was found a foundation built of small stones for a construction of semicircular shape with a diameter of 9.80 met., which probably stood under the famous throne of Apollon. No other architectural remains were found, and only a few inscriptions, two of which belonged to the Roman period; also but little sculpture, but quite a number of fragments of bronze and earthen votive-offerings. Among the bronze objects were four statuettes (three of them male, the other a nude female figure), and more than twenty representations of animals and other objects similar to the early votive-offerings found at Olympia. Among the terracotta objects are many that resemble the female Mykenian figures, and many fragments of vases of the Mykenian and geometric styles, many of the Roman period, and hardly any between the two extremes.—*Athen. Mittheil.*, 1890, p. 350; *Berl. phil. Woch.*, 1890, No. 46.

TANAGRA.—NEW MUSEUM.—The Archaeological Society of Athens has determined to establish a local museum at Tanagra, in Boiotia, whence come the well-known figurines. The museum is intended to house the great number of inscriptions found of late years, which are of much import-

ance for Boiotian onomatology. Of the terracottas the best and most important that belong to the society are at Athens, in its *Antiquarium* at the Polytechnic, in the room next to the relics from Mykenai.—*Athen.*, Oct. 11.

VAPHIO.—THE USE OF MORTAR IN THE PREHISTORIC TOMB.—In consequence of a mention of the use of mortar in this tomb made in the *Journal of Hellenic Studies*, Mr. Stillman secured from Tsountas, who excavated it, a contradiction, there having been only traces of a lining cement. Professor Gardner, who was responsible for the assertion on the ground of the word *ἀσβεστός* used in Tsountas' report, accepts the correction. Mr. Stillman takes occasion to deny the use of mortar in early Roman constructions such as the Tullianum, in opposition to Professor Middleton, and reiterates his well-known theory, that the Greeks never used at any time mortar or burnt bricks, and that mortar was an invention of the Romans.—*Athenæum*, Sept. 13, 20.

KRETE.

At Gortyna, in Krete, peasants have accidentally turned up fresh fragments of archaic inscriptions, similar to those found when excavations were conducted by Dr. Halbherr, the agent of the Italian Government. It is evident that this site, where a temple of Apollo was found and the famous legal inscription, is not yet exhausted, and it were much to be desired in the interests of science that either Italy or the Greek Syllogos of Kandia should resume researches on the spot.—*Athenæum*, Nov. 15.

ITALY.

PREHISTORIC AND CLASSIC ANTIQUITIES.

RELATIONS OF THE ETRUSCAN AND LATIN ALPHABETS.—At a recent meeting of the *Académie des Inscriptions*, M. BRÉAL read a paper on the relations of the Etruscan and Latin alphabets. His theory is, that the Etruscan is only the Greek alphabet diminished by a certain number of letters representing sounds foreign to Etruscan phonetics. This alphabet was adopted by the Latins and by other nations of Italy, Oscans, Umbrians, etc. Later, the Latins felt the *lacunæ* in an alphabet that was not made for them, and sought to remedy this by taking back from the Greek alphabet the letters they needed. But the suture is still visible.

In opposition to this, M. BOISSIER pointed out that the Latin alphabet differs from the Etruscan not simply by the addition of a few letters taken from the Greeks: it is lacking in four of the Etruscan letters and has one of different form. Could the influence of the Greek grammarians have been strong enough to cause the Latins to abandon these four letters? The opinion of MM. Kirchhoff and Mommsen, who attach the Latin

alphabet directly to that of the Greeks of Cumae and Naples, remains one of greater probability.—*Revue crit.*, 1890, II, p. 184; *Academy*, Oct. 25.

S. ANTONIO (di Monteveglio).—At this town, 30 kilom. west of Bologna, some eighteen Etruscan tombs have been carelessly opened and their contents rifled. There were found numerous vases, especially *skyphoi*, *oinochoai* and *kylikes*, and also many bronze vases so badly extracted as to be quite fragmentary, though their original importance is very evident. This is not the first time that Etruscan tombs have been found at S. Antonio.—*Not. d. Scavi*, 1890, pp. 206–8.

GREAT ST. BERNARD.—**TEMPLE OF JOVE.**—The Italian ministry, wishing to satisfy the wishes of many Italian and foreign archaeologists, has undertaken new excavations at the *Plan de Jupiter*, where the famous sanctuary was erected and where several discoveries had lately been made. It may here be briefly stated, while awaiting full details, that the researches have been especially fruitful for ancient topography. The plan of the temple has been made out from the foundations excavated in the rock which are now entirely laid bare. Bronzes and coins came to light, mostly Gallic, as well as some that were Greek anterior to the third cent. A. C.—*Not. d. Scavi*, 1890, p. 273.

BOLOGNA = FELSINA.—**ITALIC TOMBS.**—With the walls of the arsenal outside Porta Castigliane an Italic necropolis was discovered in December, 1888, but the objects found were dispersed or destroyed. The work having lately been recommenced, some twenty tombs were opened and their contents preserved and restored, but appear not to have presented any especial interest. Fifty metres to the north two others were opened, one of which was quite archaic judging from the bronze bit and the lunar razor.

The discovery of Italic tombs at different times within and near Bologna had already established the existence of such necropoli at three of the four cardinal points of the city. (1) The necropolis which appeared in 1857 in Via Maggiore, whose beginning was found in 1886 in the Piazza della Mercanzia. (2) The western necropolis starting at the Benacci-Caprara field across the Ravone torrent, and extending three hundred metres along half of the Arnaldi property. (3) The southern necropolis within the arsenal walls, whose existence was discovered in 1874. There still remained undiscovered the fourth or northern necropolis. In 1888, on the corner of Via Indipendenza and Via Falegnami, some Italic tombs were found above which were Roman tombs whose dates vary from the second to the fourth century of the empire. This is the fourth necropolis.—**BEIZIO**, in *Not. d. Scavi*, 1890, pp. 228–36.

ITALIC TOMBS OUTSIDE PORTA S. ISAIA.—Three more tombs in this necropolis were opened in May: the objects of terracotta and bronze found in them were fragmentary. In a woman's tomb the finding of a plate be-

longing to a belt confirms the use of this ornament by women. The usual supply was found of *fibulae*, ossuaries, small rude vases with linear decoration, *paalstaabs*, horse-bits, bronze swords, *cistae*, small articles of apparel and domestic use.

In August, Signor Guglielmi again took up the excavations on his property (JOURNAL, VI, 373) and opened nine Italic tombs of which a few were for cremation but the majority for inhumation. A peculiarity of the latter class is that the bodies are not oriented as usual but are faced indifferently east or west, and that the ditches where they are placed were dug in long parallel lines to contain several bodies placed at a distance of about two metres. The usual variety of ossuaries, *fibulae* and other ornaments, vases with geometric and other decoration, and implements were found.—*Not. d. Scavi*, 1890, pp. 135–8, 274–7.

ETRUSCAN TOMBS IN THE GIARDINO MARGHERITA.—The excavations in the Etruscan necropolis of the Giardino Margherita, suspended for over a year, have been resumed. One of the first objects found, among remains showing how thoroughly the tombs had been devastated, was a fine lion, carved out of a block of *pietra arenaria*, in fair preservation. It rests upon its hind-legs and stretches out its fore-legs: its style is purely decorative, and it doubtless surmounted a tomb like the other, but headless, lion from the De Lucca Etruscan necropolis. In 1875, a lion-foot was found. It would thus appear that lions were quite frequently used for the decoration of the Etruscan tombs of Bologna. The tomb on which this lion rested had been completely despoiled. Three small tombs were found in this neighborhood with some vases, lance-heads, and fragments of a red-figured vase. At a distance of some sixty metres was opened a tomb built of blocks of travertine, in which was a large sandstone stele carved on both faces and along the edges, and in this respect it reminds of the other stele found by Gozzadini eight years ago in the Arnaldi property. The figures of the reliefs present considerable variety, and are taken for the most part from Greek mythology. From its novelty and exceptional importance this stele merits careful study. On the front is a dolphin, above; in the centre a man with draped head and body in a biga drawn by two winged horses; below is a nude flying genius. The opposite side is occupied entirely by a female figure. On the edges are six compartments, three on each side, with three ascending and three descending figures. They represent (1) *Skylla*; (2) *Kirke*; (3) a winged genius holding saw, hammer and chopper; (4) *Kanake*(?); (5) a woman with a (lotus?) flower; (6) a *Nereid*. From these subjects we may deduce the interesting fact, that Hellenism exercised its influence not only on the art of central and maritime Etruria but on that of Etruria Circumpadana. This is of great interest for an exact understanding of the relations between the two Etrurias. There

are many other facts beside this to show that Professor Helbig is entirely mistaken in asserting that the art of the two populations followed entirely different directions.

Three further tombs were opened near the preceding, but all had been despoiled, and as this appeared to be the condition of all the tombs the excavation was brought to a close.—*Not. d. Scavi*, 1890, pp. 138-42.

A ROMAN HOUSE.—Between Via Gombriti and Via Imperiale (at a depth of 2.50 met.) some remains of a large Roman house have come to light. At least five chambers have thus far been made out, one of them with a mosaic pavement. Another of the rooms apparently had a suspended pavement of the kind used in the warm rooms of the baths. Further information regarding the form and decoration of this house will doubtless be obtained by the excavations that will be undertaken this winter.—*Not. d. Scavi*, 1890, pp. 204-6.

CORNETO=TARQUINII.—**DISCOVERY OF TOMBS WITH PAINTINGS.**—Professor Helbig reports in the *Not. d. Scavi* (1890, pp. 148-50) the latest discoveries of tombs at Corneto: "Excavations were continued from Feb. 24 to April 7 on the esplanade of Monterozzi near the painted tombs Nos. 19, 20. Tombs of various periods and styles of construction were found, mingled and usually placed quite close together. These were: a chamber-tomb with a ceiling *a schiena*, a type which is as early as the sixth century B. C.; six chamber-tombs on whose ceiling the main beam is shown in relief, a type which predominated in the fifth century B. C.; five hole-tombs belonging to the same century; finally, three chamber-tombs with flat ceiling, a type which commenced in the third century. All these tombs were found in a most unsatisfactory state of preservation: nearly all had been sacked at various periods, and so to speak emptied; and the ceiling of the chamber-tombs had usually fallen in.

Four of the tombs are described as being the best preserved. 1.—A chamber-tomb 60 met. from tomb No. 20 and 10 m. from the cross-road. The chamber measures 4.50 × 4 by 2.70 m., and the main beam shows in the ceiling. On each of the two benches was a skeleton: that on the right had an Attic red-figured *krater*, a bronze mirror, and an alabaster *lekythos*. The *krater* is one of the finest painted vases ever found in this necropolis: the style is severe and accurate; on one side is Europa taking hold of the bull by the horn; she and her companion have the *chiton*, mantle, low *stephanê* and bracelets. The mirror is of the usual fifth-century type. By the left-hand body was an Attic cup, two cornelian scarabs with good intaglios of archaic character, and two gold *circlets*. On the walls were hung four Attic cups and a small *olla*. One of the cups had a decoration of six *epheboi*, two on the inside and four on the exterior, in a style belonging to about 400 B. C. 2-3.—In two hole-tombs (found between the painted

tombs Nos. 19, 20) were Attic amphoræ with black figures. On the first is a Dionysiac scene poorly executed; on the second, which is in a more accurate and severe style, is a scene from the birth of Athena; Zeus, being in the midst of the premonitory pains, is surrounded by the other gods. 4.—A chamber-tomb was discovered March 14, which, though sacked, retained some interesting objects. Such were: an alabaster *lekythos*, an Attic *orcio*; gold and enamel pieces from one or two necklaces, each gold pendant being formed of four rosettes delicately worked, while the enamels are either red or black with white streaks in imitation of onyx. There were also two silver ornaments covered with gold plates, both in the shape of a couchant winged horse: they appear to have been sewed as decorations to the garment of the deceased. Other female decorations were found in the shape of a pearl ring, a cornelian scarab, a gold earring, etc.

ESTE.—FURTHER ITALIC FINDS.—A further instalment of discoveries of Italic objects on the Baratela property is noticed in the *Not. d. Scavi*, 1890, pp. 199–203. For earlier excavations reference should be made to this JOURNAL, vol. IV, pp. 209–11. The present finds were made between Oct. 1889 and March 1890. They include bronze statuettes of a warrior, of a nude and a robed man, and of a partly-draped woman; several votive nails with inscriptions, single letters and geometric decoration; needles; a small shield; three *asse* with Janus bifrons, etc.

GERACE=LOKROI EPIZEPHYRIOI.—THE IONIC TEMPLE.—A full report on the discovery of the Ionic temple is given by Orsi in the *Notizie degli Scavi* for August (pp. 248–62). It is so much more complete than the notices which were used for the previous reports in the JOURNAL (V, 497, VI, 222–4) that an analysis of it will be given here in view of the great importance of the monument. The monograph of the temple will be published, later, in the *Monumenti* of the *Accademia dei Lincei*.

As early as 1879, François Lenormant had called the attention of the Italian ministry (*Dir. Gen. delle Ant. e Belle Arti*) to the fact that the platform of a large Hellenic building at Lokroi was being demolished: but nothing resulted from his notice. It was only in the summer of 1889 that Professor Petersen, secretary of the German Institute, rediscovered these ruins, and, recognizing their importance as being those of an Ionic temple, induced the Direction of Antiquities to undertake excavations, which were carried on from early-November 1889 to mid-January 1890 under Signor Orsi. The temple was at the N. E. edge of the city, only a few feet from the northern fortified wall, at a half kilometre from the sea, which it faced.

NEW TEMPLE.—The western part of the stereobate remains (that is, the krepidoma, less the upper step) along a length of 19.04 met.; also a part of the northern stereobate with its foundation, measuring 16.37 m.; also 23.95 m. of the southern stereobate. All the rest has been destroyed dur-

ing the last few years in order to use the material. The building was constructed of blocks of calcareous tufa of very fine and milky grain, easy to work with accuracy, and finished on the spot as shown by the quantity of refuse chips. Some of the blocks are immense, the largest measuring $2.95 \times 1.125 \times 0.50$ met.; their mean length is 1.30 m. The connecting surfaces were so carefully fitted as to make the infiltration of water quite impossible, and the consequent solidity was often increased by joining the stones with iron clamps in the form of a double T or Γ , placed in deep soldered beds: these clamps are usually 26 cent. long by 5 cent. wide. Technically speaking, the temple represents the greatest progress and most varied resources of Greek architecture. A novelty is the use of

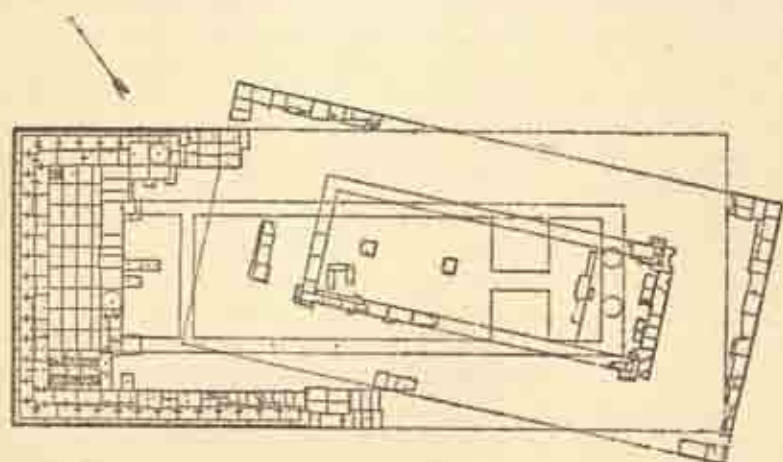


FIG. 22.—Plan of the remains of the Temple of Lokroi.

great beds of clay at the bottom of all the ditches where the foundations were to be laid: these beds of pure and tenacious clay, varying in thickness from 8 to 15 cent., were found in all the parts of the building, and were often of the greatest use in determining the missing parts, for the stone blocks when removed had left their impressions behind. They also showed that the depth to which the foundations were sunk varied widely, according to the weight to be sustained.

Stylobate.—The stylobate was a ponderous construction in five courses of blocks which decreased in size from above downward, the lower two courses, which formed the foundation proper, being rough, the upper three courses, which formed the steps, being worked with care. The measurements are: width of foundation-walls 2.40–2.50 m.; height of lower step 32½ cent., of middle step 35½ cent., of upper step 39 cent.

Pteron.—Of the pteron, or passage between the peristyle and cella, only that part remains which corresponds to the stylobate as described above. It measures from the edge of the stylobate to the opisthodomos 14.36 m. in width and 3.32 in depth; it is paved with large rectangular slabs supported on *débris* arranged in pier-like masses. The width of the temple is, on the lower step 19.04 m., on the upper step 17.32 m. The length is reached by a series of calculations based upon the examination of the clay-beds already referred to. The result is a length of 43.86 m. for the stylobate in its lowest step. This is confirmed by the calculation of the intercolumniations, as follows:

16 intercolumniations of 2.65 m.	= 42.40
2 half-columns of 0.65 m.	= 1.30
Projection of two steps beyond the base of columns at 85 mill. each	= 0.17

Total met. 43.87

The result is that this was a peripteral hexastyle temple with seventeen columns on the long side. The intercolumniation was readily calculated by the outline of a column on the northern stylobate and the lower drum with its plinth of another column. The outline gave a diameter of 1.30 m. including the *scamillus*. The intercolumniation of 2.65 met. calculated for the long sides was not that of the shorter sides, where the columns stood wider apart, having an intercolumniation calculated at 3.168 m. A calculation made upon this basis gives a total of 17.310 m., which corresponds to the measure of the stylobate already given.

Column.—There are no complete remains of a column, nor sufficient pieces for a complete restoration. The remaining parts are: the lower drum with plinth, its delicate mouldings defaced; a complete longitudinal section of one of the central drums; almost complete upper section of the column ending in an anthemion necking. Signor Orsi is inclined to place the number of central drums at four, and to give the column a height of 11.13 m. and a modulus of 1:9.8. The circular base of the column, 59 cent. high, consists of a slightly marked scotia, a torus with nine horizontal channels, a minute smooth torus, and finally a listel whence spring the 24 channels of the shaft with a mean depth of three cent. The diminution of the column equals one-sixth of the greatest diameter, as in the columns of the Erechtheion. The drums were fastened by large metallic prisms. The upper drum does not end, as in the usual Ionic columns, in a torus, but as the Erechtheion in a floral collar (that must have measured 39½ cent.) which was encircled with twelve elegant lotus-flowers alternating with as many delicate palmettes painted in red. No capital was found

entire, and it can only be doubtfully reconstructed from badly-preserved fragments. Instead of the Vitruvian *canalis* it has a robust convex rib which develops into two heavy volutes with an *oculus* decorated with a six-petaled flower: the kymation was formed of an egg-and-dart moulding; the upper part of the capitals is crowned by a torus projecting on the sides and there decorated with the egg moulding. On the side, the heavy volute forming the pulvinus receives a decoration of 12½ rows of scales framed above and below with a row of *ovoli*. The resemblance of this capital to one of the Heraion at Samos is striking.

Upper part.—Nothing remains of epistyle or frieze: a quantity of fragments impossible to place exactly belong to the cornices. There are many

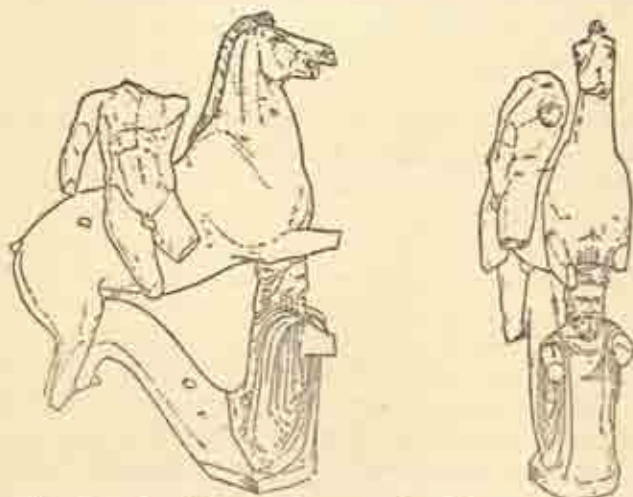


FIG. 23.—Group from Sculptures of western gable of Ionic Temple at Lokroi.

fragments of the flat tiles of white calcareous stone, *ζωλῆνες*, with which the roof was covered: their edges curve upward in order to support the *καλπτέρες* to prevent the passage of water: parts of the gargoyle-masks through which the water was led off the roof have been recovered.

Sculptures.—No trace was found of the sculptures of the eastern gable, which would have determined to what divinity the temple was dedicated. It is thought that these, together with the greater part of the sculptures of the western gable, after having fallen from the temple were used to feed the lime-kiln. The one group belonging to the western gable which was recovered in fairly good condition is of Parian marble, now of a dirty white color with surface granulated by the action of the sea air and from lying in the ground (*Fig. 23*). The subject is clear but not easy of interpretation. A strongly-built and wiry horse is represented rushing violently

forward and rearing at some obstacle to its course; against the horse rests the headless nude figure of a youth. Both figures are supported in mid-air by an anthropoichthiomorphic figure, with the torso of a bearded man of serenely solemn aspect (robed in a chiton) to which is attached the long undulating tail of a fish. With outspread arms the monster supports the fore-legs of the horse, whose hoofs rest upon its hands: the arched tail forms a graceful support to the horse's hind-legs. The entire group, cut out of a single block, rested on a thin plinth of which but little remains. The total height of the group is 1.17½ m., and the remaining length from the horse's chest backward is 82 cent., while a calculation of the wanting parts would give an original length of 1.40 m. From the entire style, the fine type of the horse, the soft fleshiness of the youth, the solemn gravity of the god, the complete lack of any archaic reminiscence, this work should be attributed to some Ionian sculptor who worked at the end of the fifth rather than at the beginning of the fourth century *n. c.* There are some twenty anatomical fragments belonging to the three figures which will allow of an almost complete restoration of the group. Of a second corresponding group, little beyond the fact of its existence could be proved. There were found only the nose and seven other fragments of the horse, and a number belonging to both the other figures, showing them to have been reversed in position, as was conjectured. Among these fragments was the head of the youth, badly damaged in its surface. These two groups stood on either side of a central figure to which perhaps belongs part of a sandaled foot: to still another figure belongs a bent left knee.

Of the akroteria which decorated the outer ends of the gable many segments of marble circles were found, of various sizes: they must have formed open-work spirals arranged in volutes as in the temple of Aigina.

Cella.—The reconstruction of the cella (composed of naos, pronaos and opisthodomos) is extremely difficult, as no stones have remained one on another except some of the foundation blocks. The following measurements were, however, ascertained: from centre of front column to cella-wall, 3.27 m.; intercolumniation of western antae, 3.12 m.; diameter of columns at base, with scamillus, 1.34 m.; clear passage between them 1.78 m.; depth of wall between antae 1.45 m. The four ends of the long walls, which formed pilasters, *i. e.*, the *parastades* of the pronaos and opisthodomos, were decorated in the same manner as the columns. The mouldings of the base probably encircled the entire cella. Nearly a complete capital of one of these pilasters has been recovered, with astragal and listel, and with alternate lotus-flowers and palmettes. The following measurements are given, in some cases tentatively: thickness of wall between oriental antae, 1.45 m.; depth of pronaos 3.30 m.; dividing-wall between pronaos and cella 3.60 m.; length of cella proper 19.25 m.; dividing-wall

between cella and opisthodomos 0.90 m.; depth of opisthodomos 3.70 m.; thickness of wall between western antae 1.45; = total length of cella, 33.65 m. The enormous thickness of the wall between cella and pronaos proves that there rose here, as in other temples, two massive tower-like constructions, perhaps to give access to the roof. The pronaos and opisthodomos were paved with slabs, like the pteron, but the cella had only a hard cement floor. Three large stones placed together in the shape of a Π in the centre of the cella and securely banded together formed the base of the altar or of the image of the god.

ARCHAIC TEMPLE.—Of this earlier temple, underneath the later one, the few remains were found in positions corresponding to the destroyed parts of the later temple; so that, while of the latter the whole western stylobate remains, of the former we can trace quite a portion of the cella and eastern section of the peristyle. The archaic temple differs from the later one in the kind of stone, in its less accurate and finished technique, in its smaller size and less grandiose proportions. The stylobate, of two rows of stones, had a length, on the eastern side, of 17.17 m. Of the southern side 2.93 m. remain at the s. e. corner, and 2.55 m. in the centre. Of the northern stylobate 3.30 m. remain at the n. e. corner, then, after an interruption caused by the foundations of the new temple, is a further piece 9.49 m. long reaching to the n. w. corner and thus determining the length, 35.30 m. Portions of a wall midway between the cella and the western peristyle seem to belong to a second internal stylobate, which would show that the temple was distyle. The width of the peristyle varies in the foundations, but must have had an average of 90 cent. The upper row of the stylobate is entirely wanting, so that there are no means of ascertaining the number of columns on the front and side. It may be conjectured, from the diameter of 74 cent. of some fragments of the shafts, that there were eight columns on the front, with an intercolumniation of 2.385 m. The only positive fact is, that the relation of width to length is 1: 2.15; whereas in the new temple it is 1: 2 $\frac{1}{2}$. The distance between the peristyle and cella is, on the south, 4.30 m. and on the north 4.58 m., reduced respectively to 3.30 and 3.55 by the width of the stylobate: this difference of 28 cent. is singular. The eastern pteron measures 6.70 m., the western 6.95 m.; it is thus excessively wide, and this makes it probable that there was an intermediate row of columns.

The cella consisted of naos and pronaos without opisthodomos and measured 22.50 by 8.15 met. Its sandstone wall, resting on a foundation 85 cent. wide, was strengthened externally by pilasters which were also placed on the antae. The pronaos was 4.10 to 4.15 met. deep, the cella about 16.70 met. It appears to have had no pavement but beaten earth:

and two blocks of calcareous stone found in this earth, still in position,* must have sustained one the altar the other the statue of the divinity.

The extremely archaic character of the temple and the thinness of the cella walls (55 cent.) lead to the belief that the entire upper part of the temple was of wood, decorated with painted terracottas. Some fragments of such terracottas were found among the rubbish under the pteron and the cella of the new temple. The wooden hypothesis is negatively proved by the absence, among the worked stones, of the smallest fragment of sculptures or cornices. The date of the later temple being c. 400 B. C. it seems safe to assign the archaic temple to a period at least two centuries earlier if not to the first arrival of the Lokrians on the Brutian coast.

The temple was situated within the walls and cannot, consequently, be the renowned temple of Persephone mentioned by Livy, which was outside the city. The deposit of early terracottas contained, apparently, no figures of Persephone but quite a number with dove and pomegranate that appeared to be of Aphrodite. It may be conjectured that, if the two side groups of the western gable represent the Dioskouroi supported by Nereus or Triton, the temple may have included as a secondary worship that of the Dioskouroi, to whom the Lokrians attributed their great victory on the banks of the Sagrus where they erected a temple to them as the saviors of the city.

NEW EXCAVATIONS.—We read in the *Athenæum* of Nov. 15: "Dr. Onst has now returned to Lokri, and has already brought to light a well-preserved fort, which formed a key of defence to this ancient city of Magna Græcia. Two other forts still remain to be explored. The archaeological plan of the whole district will be completed by the end of the month, and will be forthwith published by the Italian Government."

The *Athenæum* of Dec. 6 says: "Dr. Onst has closed his campaign at Lokri by excavating the whole front of the ancient walls facing the sea, the line of which was hitherto unknown. He has discovered four towers on the heights overlooking the city. If the Italian Government would return to the work, he thinks it might be rewarded by discovering remains of legal inscriptions of the time of Zaleukos, who is said to be the first to have given written laws to the Greeks at Lokri in the seventh century B. C."

OLBIA=TERRANOVA-FAUSANIA.—WALLS OF THE ANCIENT CITY.—In bringing under cultivation the field called *Olu Mannu*, many Roman antiquities were found coming from ruins of houses and from tombs. The most notable discovery was that of part of the foundations of the ancient city-walls. They are of granite blocks, sometimes imperfectly squared and hardly smoothed at all on their external face. From the site above mentioned, the walls can be traced seawards along a distance of some 885 metres in two perfectly rectilinear sections, northern and eastern. The

*first, measuring 360 met., extends to the *Porto Romano*; the second, from that point at the water's edge to the place called *Molino*, a distance of 525 met. In view of this discovery, it seems probable that a great tufa-block with the representation of two warriors fighting, unearthed in 1874 at the foot of this wall, belonged to the decoration of a city-gate.—*Not. d. Scavi*, 1890, pp. 224-6.

ORVIETO.—DISCOVERIES IN THE BATHING ESTABLISHMENT.—The *Notizie degli Scavi* (1890, pp. 144-7, 181-2, 210-12, 282) gives a long list sent by Signor Mancini of further objects found in excavating the rooms belonging to the recently discovered bathing establishment. The objects found were of small size and none of them remarkable. There were coins, bronze statuettes, gold and silver rings, candelabra, glass vases, architectural fragments, pieces of Aretine ware.

PALESTRINA=PRÆNESTE.—STUDY ON A PRÆNESTINE CISTA.—Michel Bréal recently presented to the *Académie des Inscriptions* a study by M. Louis Duvau (former member of the French School in Rome) entitled *Ciste de Præneste*. On the cista, found some two years ago at Palestrina=Præneste, is the representation of preparations for a banquet. The various figures are occupied with cutting up or cooking the meats. About these figures are traced words which are doubtless the words they are saying. These words, in archaic and perhaps provincial Latin, have been deciphered for the first time by M. Duvau, whose work will serve as a basis for the commentaries that will doubtless follow.—*Cour. de l'Art*, 1890, No. 40.

REGGIO=RHEGION (Calabria).—DISCOVERY OF A TEMPLE.—The building of house foundations on the Marina road and near the small railroad station has led to the uncovering at various points of a colossal stepped platform which is considered to belong to the temple of Diana Fescelidis. A good portion of the stylobate also came to light, as well as two colossal drums of columns of compact pudding stone still unchannelled, whose flat surfaces were accurately finished but not so the exterior surfaces which were to be finished in place. Both are not exactly cylindrical but slightly conical. The *crepidoma* of the supposed temple consisted of five high steps 60 cent. deep which must have been made accessible at points, as in the temple of Zeus at Akragas, by the regular insertion of secondary steps. The unusual number and height of these steps was necessary in order to raise the temple above the hillside which falls rapidly away toward the sea. The steps were followed from north to south along a distance of about 42 metres. If this is one of the long sides of the temple it would be an exception to the rule of orientation constantly followed in sacred buildings; and therefore it is necessary, before accepting this as a fact, to await complete excavations.—Onsi, in *Not. d. Scavi*, 1890, p. 267.

RIMINI.—RELICS OF AN ANCIENT SANCTUARY.—At the Villa Ruffi, about two kilom. from the city, came to light some antiquities the most remarkable of which are two marble statuettes and some small bronzes. The list is as follows: (1) Roman female statue representing Minerva Egidarmata, 60 cent. high. (2) Another Roman marble statuette, perhaps of Juno. (3) Female bronze statuette (26 cent. high) with a diadem on its head, hair dishevelled at the back and falling in two locks in front: the right hand is closed on the breast, and the lowered left holds up the edge of the garment. It is of fine archaic Etruscan style apparently of the beginning of the fourth century B. C. (4) Another bronze female statuette, also of archaic style, with diadem and necklace. (5) Statuette of a bearded man with right arm raised in the act of striking, perhaps with a weapon, while his left certainly held a shield. (6) There were also found fragments of a fine red-figured *krater* in the free broad style of the fourth century B. C. All the objects are thought by Professor Brizio to belong to a sanctuary which was in use from the IV cent. B. C. to the end of the Roman period.—*Not. d. Scavi*, 1890, pp. 208-9.

ROMA.—THE FIRE OF 540 U. C. AND THE FORUM BOARIUM.—Under the house of Sig. Köhlmann between the Vie dell' Olmata and Paolina N.-S. and the palazzo Pericoli and the Ravenna eastern E.-W., has been discovered the continuation of the ancient street found in 1873, 4.80 met. wide, and 3.80 m. under the present level. On its S. side is a private building whose lower floor consisted of four rooms of excellent reticulated work with tunnel-vaults. Its substructures are of very early date, similar to those found in the Via dello Statuto, and are formed of cubes of uncemented tufa.

This is but another good example of a general fact which has been verified of late in the entire zone of ancient Rome comprised between the Vie delle Sette Sale, Merulana, S. Maria Maggiore and the Piazza di S. Pietro in Vincoli. And this fact is of extreme interest for the history of Roman topography. Everywhere have been found bossed walls like those of the *puticoli* under the pavements of brick and reticulated houses: it is as if this large region had been destroyed by fire during the sixth century of the city and had been rebuilt at the end of the republican or the beginning of the imperial period. Also in the zone of the Forum Boarium, which was deeply excavated some three years ago, this same double stratum of remains has been found. The lower, composed of ashes and burned materials, confirms Livy's narrative (xxiv. 47) regarding the *foedum incendium* of 540 U. C. through which *solo aequata omnia inter Salinas ac portam Carmentalem, cum Aequimelio Jugarioque vico*. The upper stratum, on the other hand, preserves remains of the imperial Forum Boarium similar to those described by Crescimbeni. But there is this

difference between the two zones, that, when the city was rebuilt *inter Salinas ac portam Carmentalem*, the position of the streets and buildings was changed about 30° to harmonize with the walls of the Tiber banks; while along the slope of the Esquiline no change was made.

In the same Köhlmann house were found a beautiful series of *ionic marble busts*, slightly over life size, of excellent workmanship and in good preservation. The portraits appear to belong to the group of the *Juliae* of Heliogabalus.—*Not. d. Scavi*, 1890, pp. 213-14.

DID THE CAPITOL HAVE A DEFENSIVE WALL?—That part of the Capitoline hill which overlooks the *Vis di Marforia* has been recently cut through, showing more completely the piece of Servian wall which first appeared in January. The discovery is important, because the problem had never been solved as to whether the Capitoline citadel had a separate defensive wall distinct from that of the Servian city, or whether the walls of Servius Tullius had, as it were, absorbed the earlier defensive works of the hill at least on the side overlooking the *Campus Martius*. The problem is now solved, for the two pieces of wall discovered on the N. E. edge of the hill correspond exactly in technique, quality and size of blocks, color of tufa and especially quarry marks, with the Servian constructions of which some 42 fragments are now known. At present it is impossible to judge of the entire topography of the *arx*, but one fact is certain, that its primitive fortifications were constructed in tufa *a scorie negre* entirely similar to the tufa of the earliest Palatine walls. Remains of such walls have been found in the interior of the hill on the side of the forum, but none on the opposite side along the line of the Servian walls that belong, as these do, to the first years of the foundation of Rome.

The present piece of Servian wall is 15.20 met. long, and consists of four courses. The lower one is hardly visible; the second consists of seven blocks, placed sideways, between 1.40 and 2.10 met. long; the third has 17 stones placed frontways, six of which have quarry-marks; on the upper course are only five oblong slabs cut wedge-wise.—*Not. d. Scavi*, 1890, pp. 215-16.

THE BANKS OF THE TIBER.—On pp. 478-9 of vol. III, was published a terminal *cippus* which showed for the first time that a legal delimitation of the banks of the Tiber was made by order of the Emperor Claudius, probably in 47 A. D. It was known that, after the reorganization by Tiberius in 15 A. D. through the establishment of the *curatores alvei Tiberis*, the banks of the Tiber were newly reconstituted by these officials on various occasions during the empire, by replacing in position the terminal *cippi*. Such operations were known to have been carried out under Claudius in 47, Vespasian in 73, Trajan in 101 and 104, Hadrian in 121, Marcus Aurelius and Lucius Verus in 161, Severus and Caracalla in 197, Diocletian and Maxi-

mianus in about 300. Lately, was found on the left bank of the Tiber a new terminal *cippus* which shows that Antoninus Pius reestablished the *cippi* that were fallen or displaced. The year is 161 A. D.: in the first two months of this year the work was commenced, but it was left unfinished at the time of his death early in March and was carried on by M. Aurelius and L. Verus. The inscription reads: [imp. caesar l. aelius | hadr.] IANVS AN[toninus] | AVG · PIVS · POTIFEX · MAXIM | TRIB · POT · XXIII · IMP · II · COS · III · P · P | [a] · PLATORIO · NEPOTE | CALPVRNIANO · CVRAT | ALVEI · TIBERIS · ET · RIPAR · ET · CLOACAR | VRBIS · TERMINOS · VETVST · DILAPSOS | EXALTAVIT · ET · RESTIT · RECT · RIGORE | PROXIMO · CIPPO · P POSITOS · EX AVTO · RITATE · IMP · CAES · DIVI · NERVAE · FIL · NERVAE · TRAIANI · AVG · GERM · PONT · MAX · TRIB | POTEST · V · COS · III · P · P · CVRATORE | ALVEI · TIBERIS · ET · RIPAR · ET · CLOACAR | IVLIO · FEROCÉ

The *A. Platorio Nepote Calpurniano* who was curator of the banks for this year introduced a new term: *exaltavit*. The work of 161 appears to have been confined to reestablishing the *cippi* set up in 101 by Julius Ferox, by order of Trajan. The distance between the *cippi* was left in blank on the stone to be filled in afterward, but this was neglected. The words *recto rigore* explain the letters *R. R.* which had previously been interpreted *Recta Regione*, and signify the natural course of the river, the outline of which the *cippi* were made to follow.

BATHS OF DIOCLETIAN.—Sig. Martinelli and Cremonesi are erecting a large building in the garden which formerly belonged to the hospital of the deaf-mutes, near the S. E. corner of the wall surrounding the baths of Diocletian, in the space dividing it from the Via Venti Settembre. The discoveries may be divided into two groups: those belonging to the baths; those belonging to the private buildings erected along the south side of the *Vicus portae Collinae*.

Northern Wall.—The most important discovery concerning the baths is that of the wall which surrounded it on the north. Its existence was affirmed by Valadier, and denied by writers of the cinquecento. At least fifty metres of this wall have been found. Traces were found of a side street leading across the *Vicus portae Collinae* to a side entrance of the baths.

Early Inscription.—A thin slab of travertine found in the foundations of the old hospital bears on each side an inscription, the beginning and end of which are respectively wanting. They appear to be of considerable historic interest, and read:

SALLA · MESSAL
VS · FLAM · MART

C O S

C · REFIC · CVR

EX · AVCTOR
TI · CLAVDI · C
AVG · GERM
PONTIF · A
CN · SENTIVS · SATVR
REFICIEND · CV

Both would require long comment. With regard merely to their relation to the site, it would appear as if the slab belonged to the substratum of the baths, to the series of buildings torn down by Diocletian in order to secure the necessary area. The first letter in the last line of Messalla's inscription appears to refer to a portico or aedicula.—*Not. d. Scavi*, 1890, pp. 184-6; 214-15.

VIA APPIA.—P. Andrae has issued the third volume of his study on the Appian Way: *Via Appia dans l'Histoire og Mindemarker III* (Copenhagen, 1889, 200 pp. in 8vo). It relates to the part of the road situated in the territory of Albano, and especially to the villas of P. Claudius Pulcher and Pompey, to the identification of the ruins in the present Villa Doria, to the villa of Domitian, etc. In his bibliography he omits Tomassetti's great work *Della Campagna Romana nel medio evo*.—*Revue crit.*, 1890, I, p. 479.

VIA LABICANA.—The work on the railroad encircling the city brought to light on the first mile of the Via Labicana the level of the ancient road flanked with tombs built of large blocks. Both pavement and tombs had been badly knocked to pieces by the opening of pozzolana quarries which have in many cases fallen in. Except a few Christian inscriptions, all are pagan and are distinguished for the beauty of their type and the elegance of the slabs.—*Not. d. Scavi*, 1890, p. 156.

TOMB OF THE NASONES.—Work on the Via Flaminia opposite the quarry of Grotta Rossa has made clearly visible a section of the tomb of the Nasones, showing inedited details of its construction. On the floor of each niche two sepulchres for inhumation were hollowed out of the rock, 1.80 met. long, 51 cm. wide and 55 cm. deep, divided by a partition 23 cm. thick. They were closed by slabs, probably of terracotta, stuccoed. In front of each niche, on the floor are excavated boxes a *paleo*, each group being made to contain three bodies which were placed on a tile bed. To each body a space of met. $2 \times 0.48 \times 0.60$ was allotted. The front of the monument fell to pieces because the tufa out of which it was cut rested on a bed of easily-decomposed river-breccia.—*Not. d. Scavi*, 1890, p. 189.

PORTICO OR TEMPIETTO.—In the area of the now demolished Apollo theatre there has been excavated a broad platform formed of slabs of tufa upon which a portico or peripteral tempietto must have risen, judging from

architectural fragments and an altar found there. The excavations are being continued in order to determine the character of the building.—*Not. d. Scavi*, 1890, p. 153.

EXCAVATIONS NEAR THE CAMPO VERANO.—The continuation of the excavations near the Campo Verano have brought to light: (1) many pieces of a terracotta frieze with figures of sacrificing Victories; (2) terracotta seated statuette of a female divinity holding a cornucopia and patera; (3) beautiful small cup of enamelled glass; (4) fragment of a male statue with drapery and attitude similar to those of the Lateran Sophokles. The winged Victories are kneeling as they sacrifice the bull: each is draped only in a mantle thrown over the shoulder. Other fragments represent genii on marine tigers, palmettes alternating with masks, a head of Minerva, etc. Some have been already mentioned on p. 378.—*Not. d. Scavi*, 1890, pp. 159-60; *Bull. Comm. arch.*, 1890, pp. 339-40.

Monument of Statilia Euhodia.—In the Vigna Torlonia, expropriated for the enlargement of the Campo Verano, have been found the remains of an ancient monument quite ruined and devastated, of which the only artistic remains are part of an elegant terracotta frieze, including a representation of two Victories sacrificing a bull. Of remarkable interest is a sepulchral inscription, apparently belonging to this tomb, which reads: D · M · STATILIA · EVHODIA · VIVA · FEC · SIBI · ET | STATILIO · ERA[_s]TO · CONIVGI · OPTIMO | ITEM · STATILIAE · ERASTE · FIL · EORVM | ET STATILIO · PROTOCTETO · VIRO ET LIB · | EIVS · ITEM · LIB · LIBERTAB · POSTERISQVE | EORVM HOC · MONITVM · SIVE · SEPVLCHRVM | QVOD EST · VIA · TIBVRTINA · CLIVO · BASSILLI | PARTE BASSILLI | PARTE · LAEVA · QVOD EST · CONCLVSYM · IN | FR · A · MACERIA · CAESAE · PAVLINAE SI QVIS | VOLE[_{t m}]ANVS · INICERE SIVE · VENDERE | SIVE · ABALENAR[_e] DABET · POENAE · NOMINE · AERARIO · POPVLI · ROMANI + S · XX · N. Evidently *monitum* is written in place of *monimentum*. The tomb was built by Statilia Euhodia for herself and her husband, and she desired the concession to be extended to her daughter and her husband and to all the *liberti* of the two families. The topographic indications are interesting. It is shown that there was a cross-road at right angles with the Via Tiburtina called the *Clinus Bassilli* on whose left was another monument belonging to a *Caesia Paulina*. The fine of twenty thousand sesterces for violation of the tomb is rather small.—*Bull. Comm. arch.*, 1890, p. 334.

SCULPTURE.—Near the Via Buonarroti there were found, in a wall of late date, many fragments that belong to a draped marble female statue which can be almost completely restored except the head, hands, and part of the legs.—*Not. d. Scavi*, 1890, p. 282.

Bed of the Tiber.—A marble urn drawn up from the bed of the Tiber is decorated with a Gorgon-head below which is a wolf suckling the twins, while on its sides are olive-branches, and at its corners winged sphinxes. Besides the broken inscription on the front, we read on the cornice of the base: *Memoriae Sex Appulii Fumusi.*—*Not. d. Scavi*, 1890, pp. 216-17.

The Lions of Nektanebo II.—Among the finest sculptures transported from Egypt to Rome at the time of the Empire are two great lions which for about three centuries decorated the larger fountain of the Acque Felice and are now in the Egyptian museum of the Vatican. They are scientifically described for the first time by Professor Marucchi in the *Bull. Comm. arch.* for November 1890. In style they approach more nearly to Greek art than any other monuments of the Saitic period of the XXVI dynasty, to which they belong. The closeness of the relations between Greece and Egypt increased steadily during this dynasty and culminated in the reign of Nektanebo II (362-40), the last of the Pharaohs. These two lions are sacred to the god Thot of the city of Aprehui. *Ap-rehui* means "arbitrer and separator of the two antagonists." In Marucchi's opinion, the lions represent the adversaries Horus and Set, who were reconciled by Thot. From this fact, Thot took the title *Ap-rehui*, which afterwards passed to the city. This would be an interesting proof of the amalgamation, at a late period, of two opposing worships.

The earliest mention of the lions is made by Flaminio Vacca who states that they were found near the Pantheon under Eugenius IV (1431-37). They are carved in basalt and are reclining, facing each other, in an attitude indicating that they originally flanked the entrance to a temple. The place of the discovery was the portico of the Pantheon, and probably the sculptures were placed there by Agrippa himself.

INSCRIPTIONS.—*College of the xv viri sacris faciundis.*—In September, there were found on Via di Civitavecchia on the right bank of the Tiber some fragments of a great inscription in letters of the time of Augustus including from 150 to 200 lines. They belong to the Acts of the College of the *xv viri sacris faciundis* and relate to the secular games celebrated by Augustus in 737 U. C. = 17 B. C. To these fragments should be joined those published in the *CIL*, VI, 877 a, b, the second of which is in the Vatican Museum. As soon as a thorough search has been made for the missing fragments the publication of this important document will be confided to Professor Mommsen for the *Monumenti* of the *Accademia dei Lincei*. Further researches brought to light parts of another stone, also relating to this college, which contains the commentary of the secular games celebrated under Septimius Severus in 957 U. C. = 204 A. D. These fragments are in bad condition.—*Not. d. Scavi*, 1890, p. 285.

MISCELLANEOUS DISCOVERIES.—Among minor discoveries reported in the *Bullettino* for November and the *Scavi* of June–Sept. are the following: (1) along the bastions of the Vatican gardens, some tombs, two of which have inscriptions of the Augustan age, one of *Apuleia*, the other of *Scandilius*; (2) in the Piazza Vittorio Emanuele, a tomb belonging to the very archaic necropolis of the Esquiline, so often mentioned, containing a *bucchero* vase, a bronze vase, an Italo-Greek cup, lance-heads, *fibulae*, etc.

COLLECTIONS OF ANTIQUITIES DURING THE RENAISSANCE.—Sig. Venturi publishes in the *Arch. stor. dell'Arte* (1890, pp. 196–206) a series of documents relating to purchases, discoveries and collections of ancient works of art made in the XVI cent. It is entitled: *Ricerche di antichità per Monte Giordano, Monte Cavallo e Tivoli nel secolo XVI*, and relates largely to purchases of Cardinal Ippolito d'Este, brother of the duke of Ferrara.

PROGRAM OF THE GERMAN ARCHÆOLOGICAL INSTITUTE.—Dr. Petersen, beside conducting the regular meetings, will have, from Dec. 9 to April 21, a series of classes in the various Museums of Rome for demonstration and for archæologic practice in the examination of monuments. Dr. Hülsen (sub-secretary) will give three times a week, from Nov. 15 to Dec. 20, demonstrations *in situ* on Roman topography; and, if the course be well supported, he will repeat it in April and May of the following spring. Beside this, he will hold practice-classes in epigraphy, from Jan. to beginning of April. In the summer, Herr Mau will give an eight-day course of lectures at Pompeii.—*Builder*, Oct. 25.

ROVIANO.—**ROMAN INSCRIPTIONS.**—Roviano is situated near the river Aniene between Arsoli and Anticoli Carrado, on the Via Sublacense, before the branch of the Via Valeria. In laying the foundations for a second aqueduct of the Acque Pia-Marcia, there were found, at the base of the hill on which Roviano is built (near the modern road to Subiaco) one *cippus* and three mile-stones together with traces of the pavement of two bifurcating ancient roads. They were found at a depth of about two metres and at a distance of but a few feet from each other. Their description is as follows: (1) travertine *cippus* representing a plain engaged column with capital and base, with the number XXXVI and, below, an arrow pointing to the left of the spectator. (2) Column of *palombino* with two rudely-incised inscriptions: that on one face reading: XXXVI | D D N N | FLAVIO VAL | CONSTANTIO ET | GALERIO VAL | MAXIMIANO | INVICTISSIMIS ET | CLEMENTISSIMIS | SEMPER AVGG ET | D D N N | FLA. VALERIO | SEVERO ET | GALERIO VALERIO | MAXIMINO | NOBILISSIMIS | AC REATISSIMIS | CAESS. That on the other face reads: XXXVI | D D N N | CONSTANTINO | MXIMO ET VAL | LICINIANO LICINIO | ET FL. CRISPO ET | VAL LICINIANO LI | CINIO ET FL CL | CONSTAN | TINO NOBB | CAESS B B P | NATIS. They belong to the year 305–6 and a little later. (3) Column of *palombino* with a rude and fragmentary

inscription reading: LIBERATORIBVS | ORBIS DDD NNN | VALENTINIANO | VALENTE ET | GRATIANO [inve[t]issimi[s] AVGG VO... | X MVLT... | XX FELIC. | TER. (4) Column of calcareous stone with a much-corroded inscription of which only the following words could be made out: INVICTO... | VICTORI AC... | TRIVNFATORI SENPE... (sic). This discovery is of topographic importance, as it shows the exact point where the Via Sublacense bifurcated from the Via Valeria.—*Not. d. Scavi*, 1890, pp. 160-64.

SULMONA.—DISCOVERIES IN THE ANCIENT NECROPOLIS.—Several rectangular tombs have come to light in the work on the railway-line Sulmona-Isernia. This necropolis is found to join that previously known of Zappanotte. The terracotta objects found are mostly black-varnish ware. In one tomb, two iron lances were found, a bronze and an earthen oinochoë. Finally, there is a calcareous cippus with an inscription including the Pelignian name *Pacius*.—*Not. d. Scavi*, 1890, pp. 222-3.

VERONA.—STATUE SIGNED PRAXITELES.—The marble fragment recently discovered at Verona bearing the name of Praxiteles consists of a trunk of a tree, which served as a support to the statue (as in the *Hermes* found at Olympia), upon which may still be seen traces of the clothing. The inscription runs thus, Πραξιτέλης έποίησεν, and not επόησεν, as was erroneously given in the telegraphic dispatch in the *Times* of last week. Of the small fragments hitherto discovered it has been impossible to put anything together.

ROMAN STATUES.—Besides these, some ten statues, whole and broken, were found imbedded in a wall, but they are all of Roman times. The discovery being of great importance, the Minister of Public Instruction has appointed Dr. Orsi to make a report thereon before returning to Lokri.—*Athenæum*, Sept. 27.

CHRISTIAN ANTIQUITIES OF ITALY.

LORETO.—RESTORATION OF THE BASILICA.—The famous basilica of Loreto, centre of the noted pilgrimage, is well known as a monument upon which some of the greatest artists of the Renaissance left their mark. Such were the architects Bramante, Giuliano da San Gallo (with his famous cupola), Giuliano da Maiano, and Baccio Pintelli; the sculptors Andrea Sansovino, the Lombardi, Della Porta, Benedetto da Maiano, and Giovanni da Bologna; the painters Melozzo da Forlì and Luca Signorelli. But the church founded in the first half of the xv cent. is a fine and harmonious Gothic church, unique in being fortified to resist Mohammedan invasians by sea; its original architecture has been injured by later additions and changes which spoil the harmony of lines and the general effect. A complete restoration has been in progress for some years under Count Giuseppe Sacconi, whose object is to remove all barocco and other

changes and additions, and restore the original form to the entire building.—*Arch. stor. dell'Arte*, 1890, p. 238.

LUGO.—**PAINTINGS OF THE XV-XVI CENT.**—Signor L. Manzoni calls attention to a series of frescoes which decorate a little church near Lugo and are the only works of this kind in the city. Some are assigned to Dosso Dossi, some to Giovanni Quirizio da Morano. There are various dates between 1471 and 1534, and examples of both the Venetian and Ferrarese Schools, many of but little value but others of great historical importance.—*Arch. stor. dell'Arte*, 1890, pp. 229-31.

MANTOVA.—**RESTORATION OF FRESCOES BY MANTEGNA AND HIS SCHOOL.**—In 1875, in the Mantegna chapel at S. Andrea in Mantova (so called because it contains Mantegna's tomb) there were discovered on the walls and vaults the frescoes executed in 1516 by Francesco Mantegna and others of the great master's school. They are at present being carefully restored by Sig. Filippo Fiscali sent to Mantova for this purpose by the government. The finest of the three paintings representing the holy families—that with the Virgin and Child, St. Elizabeth and John the Baptist, St. Joseph and St. Zachariah—is attributed by some to Andrea Mantegna himself, a work of his declining years. All the paintings were badly damaged.—*Arch. stor. dell'Arte*, 1890, p. 233.

MILANO.—**POLDI-PEZZOLI COLLECTION.**—This fine collection of works of art, left to his native city a few years ago by Cav. Don Giacomo Poldi-Pezzoli, has recently been fully illustrated by photographs on isochromatic plates by C. Marcozzi of Milano.

Valuable additions are being made to this collection. Among the most recent are the following interesting paintings. (1) Youthful female head by Cima da Conegliano; a beautiful, pure and clear example of the master's style. (2) Two little gems by Andrea Solari, who is now so well represented in the museum as to be made a specialty, from 1499 up to 1515. The subject of one is John the Baptist in the desert; that of the other, S. Antonio Abate. Their date appears to be about 1512, when the artist had reached his maturity.—*Arch. stor. dell'Arte*, 1890, pp. 235-6.

RESTORATION OF BORGOGNONE'S FRESCOES.—The fresco by Ambrogio da Fossano (called Borgognone) in the apse of the church of S. Simpliciano at Milano is among the most grandiose examples of this master. The work was done by him when, after Giovanni Alimento Negri was made abbot in 1468, Borgognone was charged with painting the vault, choir, and semi-dome. The fresco of the apse, which alone remains, represents the Coronation of the Virgin. It has been very badly damaged by the infiltration of water, and its restoration is being carried on by Sig. Steffanoni, who has transferred the fresco to canvas.—*Arch. stor. dell'Arte*, 1890, p. 237.

MODENA.—NEW SCULPTOR OF THE RENAISSANCE.—It was found necessary, in order to place the organ in the north chapel of the cathedral, to remove from it two tombs of the Renaissance period, one of the Molza family, the other of the Rangoni family. On the Molza monument there appeared an inscription showing its sculptor to have been **BARTOLOMEO SPANI**, called *Il Clementi*, of Reggio, a sculptor worthy of study and fame. The monument was erected to Francesco Molza and his parents by his wife Caterina de'Rangoni. He died in 1512: his wife in 1520. The monument was executed between these dates.—*Arch. stor. dell'Arte*, 1890, p. 335.

PESARO.—ARCHITECT OF THE PREFECT'S PALACE.—The prefect's palace, formerly the residence of the Lords of Pesaro, has been considered by modern writers to be a work of Girolamo Genga, who built it either under duke Franc. Maria della Rovere (1513-38) or under his son Guidobaldo II (1538-74). These writers—such as Ricci and Lübke—based themselves on a wrong interpretation of a text of Vasari's *Lives* which relates merely to a restoration which is even now evident. A document recently published by A. Bertolotti shows that, in May 1465, the Marquis of Mantova requested Alessandro Sforza, Lord of Pesaro, to send him his architect Luciano da Laurana, who afterwards, in 1467, entered the service of Count Federigo of Urbino. The palace of Pesaro has in many parts the architectural and decorative features of the xv century. Such is the undisturbed façade on the main square. The chronicles also relate that in 1475 the wedding of Costanzo Sforza, son of Alessandro, with Camilla of Aragon, was celebrated in the magnificent hall which still remains over the loggia. The form of the windows of Pesaro bears the greatest similarity to that of the windows in some parts of the palace of Urbino—a well-known work of Laurana; and especially to be noticed is this style of window in which side pilasters sustain a complete trabeation (epistyle, frieze, and cornice), a form so frequent in Roman architecture, which was first revived in Renaissance architecture by Laurana.—*Arch. stor. dell'Arte*, 1890, pp. 239-40.

PONTE CAPRIASCA (Ticino).—EARLY COPY OF LEONARDO'S LAST SUPPER.—Sig. G. Frizzoni contributes to the *Archivio stor. dell'Arte* (1890, pp. 187-91) an illustrated paper on a copy of Leonardo da Vinci's Last Supper. It is in the parish-church of Ponte Capriasca in Canton Ticino near Lugano. It covers the wall of the left transept, and is nearly though not quite of the dimensions of the original. Its style indicates the first decades of the xvi cent., and the painter is judged to be a well-known pupil of Leonardo, the Milanese Gian Pietrino, called Lomazzo, this being suggested by a painting by him that is placed opposite the Last Supper in the same church. This copy is remarkable for the contrast between the brilliancy of the flesh tints and the strong coloring of the drapery. The

architecture of the room varies from the original, for example in having only two instead of three windows at the end. It preserves the details of the lower part of the composition, almost entirely defaced in the original. Arguments are given against the attribution of the copy to Pietro Luini a son of Bernardino Luini. There are reasons for attributing its execution to the year 1520.

ROMA.—DISCOVERY OF THE BASILICA OF S. SYLVESTER I.—The president of the Pontifical Academy of Archaeology, at a meeting of that institution, announced the discovery of a basilica in the church of St. Sylvester, containing the tombs of six Popes, including that of Pope Sylvester I, who occupied the Papacy from the year 314 to the year 326.—*N. Y. Independent*, Jan. 8, 1891. [It is probable that this means the discovery, under the church of SS. Silvestro e Martino, of the famous basilica constructed by Pope Sylvester I *in titulo Equitii*. It appears to have been the first basilica constructed in Rome after the peace of the church. All traces of it had disappeared and its site has been a matter of dispute. Its discovery may be one of the most important in Christian antiquities; it is safe, however, to await particulars.—ED.]

BASILICA OF S. VALENTINO.—Professor O. Marucchi reports to the Roman Society of Christian Archaeology certain epigraphic discoveries connected with the restoration of the basilica of S. Valentinus on the Via Flaminia, whose discovery has been on several occasions referred to in the *JOURNAL*. The ruins have been surrounded by a wall to which the many inscriptions found have been attached. During the work, the following new fragments were discovered. Two fragments with a few letters of purely Damasian character, showing, for the first time, that Pope Damasus placed one of his poems on the tomb of Valentinus. He also ascribes to this basilica the important inscription preserved in the atrium of Santa Maria in Cosmedin, which shows that the basilica was consecrated after a great restoration in the year 898 under the pontificate of John IX. Comm. De Rossi—in speaking of the importance of these Damasian fragments as a further proof that this Pope intended to systematically decorate with inscriptions the tombs of all the most illustrious martyrs—publishes part of a Damasian inscription found recently in the Campo Verano: *Marmoribus vestita . . . | quae intemerata fides i . . . | hic etiam paries iusto . . . | omnia plena vides i . . .* The remains of the monument here commemorated were still seen in 1864: Damasus here probably inscribed the names of the martyrs of the Via Tiburtina. Prof. Marucchi, in a further communication, spoke of the discovery of an inscription of the fourth century which mentions a Jew converted to Christianity, and showed, from several fragments, that the society of the *subaediani* had its necro-

polis at the first mile of the Via Flaminia near the basilica.—*Bull. Arch. crist.*, 1890, pp. 7, 8, 15, 16.

LATERAN BASILICA.—*A Sculpture of Leo III.*—P. Grisar calls attention (*Bull. Arch. crist.*, 1890, p. 25) to a fragment of a marble arch belonging to a ciborium or a door, recently exhibited in the Lateran cloister, having been found there during the recent excavations. It contains the monogram of *Leo* followed by the sigla *Scis*, to be read *sanctissimus*, and by the verse *qui prœsul fulget (in orbe)*. This *Leo* must be, for palæographic reasons, Pope *Leo III.*, who carried on important work at the Lateran basilica.

CATACOMBS OF PRISCILLA.—*Comm.* De Rossi reports (in the *Bull. Arch. crist.*, 1890, pp. 24-5) on the excavations carried on in the cemetery of *Priscilla* during the winter of 1890. Investigations having been pursued in the inner galleries, inscriptions were found belonging to the most archaic families of this most ancient necropolis: these confirm the rules hitherto laid down for the chronology of Christian inscriptions, as they contain either the mere names composed of the gens and cognomen, or at times also of the prænomen, or else the mere formula of apostolic salutation and acclamation, *pax tecum*, *pax tibi*. Of the various symbols only the anchor occurs, at times cruciform, unaccompanied by the fish, which was already frequent in the Christian symbolism of the second half of the second century. Everything confirms the great antiquity of this cemetery of the *Via Salaria*, and the double epigraphic family of its primitive nucleus—that of the epitaphs cut in marble, and that of the inscriptions painted in red on the tiles. In a beautiful Greek inscription to a woman named *Rhodine* we read the extremely rare acclamation OKYPIOC META COY. Furthermore, the late discoveries confirm the great antiquity of the painting representing the Virgin nursing the Child, in a cubiculum of this cemetery; for in this very cubiculum have been found inscriptions painted in red or cut in marble of a very early date, among which are to be noted those of two *Ulpii*, a name very common in the time of *Trajan* and the following generation. There is every confirmation of the conjecture, that this painting belongs to the first half of the second century or to an even earlier date.

CHRISTIAN SARCOPHAGI.—*Mgr. de Waul* has recently purchased, for the museum of the *Campo Santo Teutonico*, three Christian sarcophagi. One represents on one side a vintage scene, on the other a harvesting scene. The second has the well-known scenes of the Hebrew children in the fiery furnace and *Jonah* cast into the sea. The third, also, has *Jonah*, and the group of the busts of the two parents with a child, under a veil supported by two genii. *Comm.* De Rossi described to the Society of Christian Archaeology the sarcophagus of a child found outside *Porta Angelica* on which is represented the cycle of *Jonah* together with two shepherds. It is proba-

bly from the Vatican cemetery and belongs, like the others, to the IV cent.—*Bull. Arch. crist.*, 1890, pp. 9, 21.

THE BRONZE STATUE OF ST. PETER.—The famous seated bronze statue of St. Peter which has been venerated in the Vatican basilica for so many centuries, and usually been considered to belong to the early Christian period and in particular to the time of Pope Leo in the fifth century, was thought by Didron to be a work of the second half of the XIII century. Franz Wickhoff has contributed to the *Zeitschrift f. bild. Kunst* (1, 4, Jan., 1890) an article in which he brings strong arguments in support of Didron's opinion. He shows (1) that the art is not that of a time of decadence but of a period of new birth, when the style is strong and full of life though somewhat stiff; (2) that it cannot be (as was asserted by some) a remodelled statue of a Roman consul, is shown by the fact that the handles of the two keys and the band that united them are modelled in low relief on the drapery itself.

The most interesting part of the article is that in which the author seeks to assign this work (one of the finest pieces of Italian mediæval sculpture) to a known sculptor. He considers it, after careful comparison with the known works of Arnolfo del Cambio, and the analogous statue of Charles of Anjou in the Palazzo Senatorio, to belong to the school and manner of that artist. It is probable, however, that Arnolfo was not by any means so penetrated with classic elements as to enable him to execute such a work. Mr. Wickhoff is doubtless unaware of the extent and importance of the native school of Roman sculptors during the second half of the XIII cent., and of the strong classic elements it contained. It is to this school and not to any Tuscan artist that the statue of St. Peter might be attributed, and the name that spontaneously occurs is that of Vassallettus, the author of the cloister of St. John Lateran, of the tomb of Hadrian V, and of many other works of the first order between about 1225 and 1275.

THE BIBBIENA FRESCOS BY RAPHAEL AND GIULIO ROMANO IN THE VATICAN.—Access to the bathroom of Cardinal Bibbiena, on the third floor of the *Loggie*, had for many years been denied to all visitors, so that its frescoes were but little known from careful description. Hermann Dollmayr has succeeded in penetrating its precincts, and he gives a careful description of the frescoes, published in the *Archivio stor. dell'Arte*, 1890, pp. 272–80. Cardinal Bibbiena (as we learn from Bembo's letter of April 19, 1516) himself selected the subjects, which were divided into two groups: (1) the birth of Venus and her adventures with Adonis; (2) the adventures of Pan and Vulcan, to illustrate Ovid. The designs were by Raphael, the execution by Giulio Romano, the date 1516; in conception, one of the earliest works of Raphael from classic legends.

VENEZIA.—THE ARCHITECT OF THE SFORZA PALACE.—Sig. Caffi has published a letter of the famous architect of the early Renaissance, Averulino, called Filarete. It was addressed by him to Francesco Sforza I, duke of Milan, in 1458, and shows that to this Tuscan artist was entrusted the construction of the palace which Sforza desired to build in Venice after the peace with Venice in 1454. It is signed *Antonius architectus*. Averulino was then in Milan for the work on the *Ospedale Maggiore*. The palace was only commenced, and was to have been magnificent. Francesco Sansovino, in his *Venetia nobilissima*, says it was commenced *con gran principio* of columns and marbles.—*Cour. de l'Art*, 1890, No. 37.

WHOLESALE VANDALISM.—The *Weiner Bauindustriezeitung* says that the modernizing of Venice is proceeding apace. Canals are being filled in and streets made instead. Of late, a large number of the magnificent ancient palaces have been pulled down and ugly barrack-like structures erected in their place. If a proposal now before the city corporation be accepted, it is to be feared that the famous town will be entirely changed. This plan proposes the demolition of the old buildings *en masse* and the building of modern ones, as well as the filling in of canals and the making of streets on a large scale.—*Builder*, Oct. 18.

MURANO.—DANGER TO THE DA MULA PALACE.—The firm Tommasi e Gelsomini is reported as treating with an antiquarian for the sale of all the sculptures decorating the façade and interior of the monumental Palazzo Da Mula. This has called attention to the importance of the palace. It was built on the canal of Murano in the XII century, and shows remains of the art of more than three centuries, up to about the middle of the XV cent. In the court is a round arch with a marble frieze decorated with foliage in the style of the end of the XII cent.: to the same date belong the coupled colonnettes flanking it and the Italo-Byzantine double window under a rich arched cornice with a circular relief bearing two animals fighting, etc. The façade was much changed in the XIV and XV centuries, when pointed windows were opened, trilobated or with elaborate tracery; as well as some in the style of the Renaissance. There also remain, however, paterne of c. 1200, with palms and vines with animals fighting or birds pecking, carved in marble; and, finally, dentellated incrustations, disks in red Egyptian porphyry, in the oriental taste of the Middle Ages. This palace is therefore one of the most noteworthy for its decoration, and perhaps the most picturesque in its color among all those that rise along the lagoons. To dismantle it would be a piece of atrocious vandalism and it should be prevented by government authority.—*Arch. stor. dell'Arte*, 1890, pp. 237-8.

VICENZA.—PROJECTED DESTRUCTION OF THE ANGARAN PALACE.—It is reported that the municipal authorities of Vicenza have the intention of tearing down the Palazzo Angaran, built during the second half of the

xv century, a perfect and complete example of the civil architecture of the Renaissance in the Venetian province, where the Lombard style took on a specially beautiful form.—*Arch. stor. dell'Arte*, 1890, p. 233.

SICILY.

At Megara Hyblaia a fresh series of excavations will begin in a few days under the inspection of Dr. Orsi, who acts for the Italian Government.—*Athenæum*, Jan. 3, 1891.

ARTISTS' SIGNATURES ON SICILIAN GREEK COINS.—At a meeting (Oct. 16) of the Numismatic Society (London), Mr. A. J. Evans read a paper *On some New Artists' Signatures on Sicilian Greek Coins*. Upon a tetradrachm of Himera he had detected the signature of an earlier **KIMÔN**, in all probability the grandfather of the well-known Syracusan engraver. This piece was struck c. 460 B. C., and therefore represents by far the earliest signature hitherto discovered on a Greek coin. On a tablet held by Nikê on one of the latest tetradrachms of the same city Mr. Evans had further succeeded in deciphering on a specimen in the Paris Cabinet the inscription **MAI**, which must also be referred to a Himerean engraver. New evidence was brought forward establishing the activity of the later Kimôn at Messina, and attention was called to a remarkable coin by this artist on which the head of the nymph Pelôrias appears in the field coupled with her name in microscopic letters. Reference was further made to the artist **EVARCHIDAS**, recently added to the roll of Syracusan engravers by Prof. Salinas, of Palermo, from a type supplied by a hoard of coins discovered in Western Sicily. This artist appears in association with Phrygillos, and Mr. Evans was now able to contribute not only some fresh specimens of tetradrachms in which these engravers had collaborated, but a hemidrachm apparently from the same hands. The tetradrachm-reverses by Evarchidas are of great interest from the fact that upon them Nikê holds aloft an *akrostaton* as well as a wreath above the victorious *quadriga*, and this naval trophy has been with great probability connected by Salinas with the annihilation of the Athenian fleet in the great harbor of Syracuse in 413 B. C. In conclusion Mr. Evans was able to describe a new signature of **PARME** . . . at Syracuse, and a tetradrachm of Kamarina, recently procured by him in Sicily, presenting a new signature of the engraver **EXAKESTIDAS**. In this latter case the first letters of the name were inscribed on an open diptych in front of a very beautiful head of the youthful Hēraklēs. In the course of the paper the author brought forward a variety of evidence to show that the received chronology of the Sicilian coin-types of the last quarter of the fifth century B. C. needed considerable revision, and that the *quadriga* in particular had reached a highly advanced and even sensational stage of development as early as 415 B. C. A discussion followed, in which Dr. H. Weber and Dr. B. V. Head took a leading part.—*Athenæum*, Oct. 25.

SUMMARIES OF PERIODICALS.

ARCHIVIO STORICO LOMBARDO. 1890. June.—D. C. AGUILHON, *Some sites of the ancient court of Monza that have changed name.* This paper illustrates some recent archaeological discoveries. The present *S. Giorgio al Lambro* has a Roman necropolis discovered in 1883; it was called, as early as 841 A. D., *Coliate*, and this name may be of Roman origin. *Biassono* or *Blassonum* became afterwards *Villola*.—L. BELTRAMI, *Unknown descriptions of the cities of Pavia and Milano at the beginning of the XVI cent.* Pasquier de Moine, *portier ordinaire* of Francis I of France followed that king in his expedition to Italy in 1515 and made copious notes on the cities that were visited, especially Pavia and Milano. His diary was published at Paris in 1525, but, as only three copies are known to exist, the information here given from it is practically inédited. It is especially interesting, artistically, for its descriptions of sepulchral monuments and other sculptures, such as the monuments of S. Augustine and Luitprand at S. Pietro in Ciel d'Oro, and that of Ubaldi († 1400) at S. Francesco, in Pavia. Of even greater interest are his architectural descriptions of the castle and Certosa of Pavia; and, in Milano, of the castle, the Carmagnola palace, the churches of S. Maria delle Grazie (which he considers the finest in Milano) and S. Angelo with its convent, a monument of the greatest importance destroyed in 1551, &c.—G. CAROTTI, *Report on the Antiquities added to the archaeological museum in Milano during 1889.* The collection of works of art and archaeology left by Marchese Ponzzone to the museum were added in 1889. There are among them a few Egyptian objects, notably a mummy-case. Other pieces are: a bracelet of the bronze age; a Roman inscription, frieze, amphore; a Lombardo-Byzantine relief; some Lombard capitals; some architectural fragments of the ancient *Palazzo della Ragione*, recently found, dating from the XIII cent. (1228–33). Several pieces date from the XIV cent.: an engraved tombstone with the figure and inscription of *Alberto della Corte* († 1361), and another, more elaborate, conjectured to be of Lanfranchi of Pisa. An inscription from the monastery of S. Bernardino *alle monache* gives the name of the architect in the XIV cent.: *MAISTER IACOVS DE YESINO ME FECE* †. Of the Renaissance the finest piece is a painted terracotta head of John the Baptist of almost life-size. It belongs to the Lombard school of the first years of the XVI century, and has great artistic merit combining an ideal type with realistic treatment. There is also a basrelief attributed to Tommaso Rodari who worked at the cathe-

dral of Como, whence this relief came, between 1491 and 1515. In another basrelief of the Virgin and Child the Tuscan influence, especially of Luca della Robbia, is evident. There is also a series of objects found in the course of carrying out the new *piano regolatore* of Milano. Traces of Roman houses and streets were found; of great interest is an amphora with two inscriptions, one Etruscan, the other archaic Roman. Some Renaissance sculptured pilasters were found, of developed Renaissance style, whose similarity to the sculptures of the Della-Torre monument in *S. Maria delle Grazie* and those of the Brivio monument in *S. Eustorgio* show them to have been probably executed by the brothers Francesco and Tomaso da Cazzanigà, who flourished in 1483. There were found at the same time a large number of Renaissance decorative terracottas. Quite a collection of objects comes from excavations in the Gallo-Roman necropolis near the Certosa of Garegnano.

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BULLETTINO DI ARCHEOLOGIA CRISTIANA. 1888-89. Nos. 3-4.—G. B. DE ROSSI, *Priscilla and the Acilii Glabrones*. The author continues in this paper his account of recent discoveries in the Catacomb of Priscilla. First, there is a description of that part which is between the *hypogeum* of the Acilii and the *cubiculum* of *S. Crescentianus*. This part is full of *graffiti* showing great popular veneration in ancient times for saints Priscilla and Crescentianus. *Cubiculum I* of Crescentianus is decorated with large figures painted in fresco. The subjects are: the three Hebrew youths refusing to adore the bust of Nebuchadnezzar; the resurrection of Lazarus; the resurrection of the daughter of Jairus. This article is, however, confined to a description of *Cubiculum G*, the last of the *hypogeum* of the Acilii. This chamber, though thus connected, came to have a separate entrance in the times of peace on account of the veneration in which it was held, as is shown by the *graffiti* of the fourth century. This *cubiculum* had an *arcosolium*, an oven-shaped tomb and a number of marble sarcophagi placed against the walls, fragments of which have been found. In the *arcosolium* there originally was a mosaic now totally destroyed, but this destruction is recent, because the outlines traced on the wall for the mosaicist and the impressions of the cubes show that it is the very mosaic seen and drawn by Agincourt in 1780, and published on pl. XIII. 16 of his work (cf. GARRUCCI, *Arte Cristiana*, tav. 204.2). The sub-arch was covered with meanders which centred in the monogram $\bar{\chi}$ within a circle, showing the mosaic to be not earlier than the IV cent. In the lunette the centre was occupied by the large figure of a matron in a heavy mantle with both arms raised in the *orante* attitude. She is accompanied by four smaller figures, two on each side: the central figure probably represents Priscilla, the others, her descendants, such as Pudens, Pudentiana,

Praxedis, etc. An interesting *graffito* mentions *domna Priscilla*. The conclusion is reached, that the *arcosolium* with the mosaic is the place where Priscilla was buried. There follows a discussion as to the identity of Prisca and Priscilla, and of the Priscillas of the family of the Acilii Glabrones. The probabilities are, that the Priscilla from whom the cemetery got its name belonged to the Acilii Glabrones; that the *hypogeum* of the Acilii lately discovered was the primitive nucleus of the catacomb; that, in fine, the *coemeterium Priscillae* was established in *praedio Aciliorum*. One of the inscriptions mentioning Priscilla is the sepulchral poem of a high magistrate of the iv-v cent. who was prefect of Italy, Illyria, and Africa, probably the famous Anicius Acilius Glabrio Faustus who held this office under Valentinian III, *c. g.*, in 438 A. D. The question is then raised, whether the new discoveries can be reconciled with the old conjectures regarding the *gens* of Pudens and Priscilla: whether they belonged to the *gens* Cernelia or Acilia. De Rossi also believes that Aquila and Prisca, the friends of St. Paul, were buried in the cemetery of Priscilla, and that their relics were found in the ix cent. by Leo IV, who transferred them to various churches. These two also may have been dependents of the Acilii Glabrones.—*Inscriptions found in front of the church of SS. Cosmas and Damianus on the Via Sacra.* Among these are fragments of two metrical inscriptions. The first belongs to about the ix cent. and is of one Leo who was papal *cubicularius*. There are also fragments of a Damasian hymn probably belonging to a *eulogium* of SS. John and Paul.—*Metrical Epitaph of the Virgin Irene, sister of Damasus.* This is the most important of the fragments mentioned above, as it forms part of a very long inscription written by Pope Damasus for the tomb of his beloved sister Irene and preserved in the copy of a pilgrim of the seventh century. This copy is famous and has often been edited. The fragment is of careless script, and is anterior to the accession of Damasus to the pontificate, for his sister died young.—*The Ciborium, Altar, and Reliquary at S. Stefano near Fiano Romano.* Fiano is about 24 miles from Rome on the Via Tiberina. Its church of San Stefano is an early basilica. The *ciborium* is a work of the mediæval Roman school, of remarkable elegance and good preservation. It consists of three stories and belongs to the middle class of such monuments. Tomassetti (*Arch. Rom. St. Pat.*, vii, pp. 367, 393) and Stevenson (*Mostra*, p. 177; *Bull.*, 1880, p. 59) had already spoken of its close resemblance to that of S. Andrea in Flumine near Ponzano, in the same region. On the latter we read the inscription: † NICOLAV' CVM SVIS FILIIS IOANNES ET GVITTONE FECERVNT HOC OPVS. Both tabernacles are evidently by the same artists (*cf. Arch. Rom. Stor. Pat.*, 1880, p. 375). The reliquary contained three bronze pectoral crosses.

BULLETTINO DI PALETOLOGIA ITALIANA. 1890. Nos. 5-6.—**PIGORINI**, *The palethnological discoveries in the Veronese commune of Breonio judged by Gab. de Mortillet.* This is a defense of the authenticity of the silex objects in the commune of Breonio near Verona against the renewed attacks of Prof. de Mortillet.—**PIGORINI**, *An Italic bronze object of the first iron-age, and some of its terracotta imitations.* The writer discusses the opinions of Gozzadini, Zannoni, Helbig, Brizio, and others, regarding the use of an object of heavy cast-bronze with bell-shaped outline found, together with a striking implement, in early Italic tombs of the first iron-age. He then concludes: (1) The Italic tribes settled between the Po and the Apennines, in an early part of the first iron-age, were sometimes in the habit of placing in their tombs a bronze axe-head, or a bronze object of bell-shaped outline similar in shape to an axe-head, which, being heavy and cast and associated with a beating instrument, must be considered as a bell or *tintinnabulum*: both the axe-head itself and the sound made when struck by it or the *tintinnabulum* which imitated it, were regarded as averting evil. (2) As was the custom for other objects, so with the axe-head and the musical instrument, not only small models were made as amulets, but also reproductions in bronze and terracotta for sepulchral use. (3) The fictile reproductions soon departed from their original type and passed into small truncated cones used for the same purpose, and continued these in use through the Roman period.

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JAHRBUCH D. K. DEUTSCHEN ARCHÄOLOGISCHEN INSTITUTS. Vol. V. No. 1. 1890.—**W. STUEDEMUND**, *On the Mosaic of Monnus.* This mosaic is published, *Ant. Denkm.*, I, pls. 47-49. It consists of nine octagons. Of these, the central one is occupied by Kalliope and Homer. The others contain, each, a Muse, a pupil of the Muse, and some representation of the art or science over which the Muse presides. The inscriptions preserved are: *Polymni(a)*, *Urania*, *(C)lio*, *Euterp(e)*, *(T)ham(y)ris*, *(Ae)icar(us)*, *Aratos*, *Cadmus*, *Agnis* (= *Hyagnis*). A similar list of Muses with their special provinces and pupils is found in an anonymous treatise preserved in several mss. Clemens Alex., *Strom.*, I, cap. 16, 76, p. 363 P. (copied by Eusebios, *Præp. Evan.*, x. 6, 11) mentions Hyagnis (or better, Agnis) and Thamyris, and just before them Cadmus. Clemens also (I, 15, 69, p. 357 P.) mentions Akikaros in connection with Demokritos. Of Akikaros nothing further is known. The title *Ἀκίκαρος* given by Laertius Diog. as that of a book by Theophrastos shows that a book existed treating of the relations of Demokritos to Akikaros.—**A. MICHAELIS**, *The Statue-Court in the Belvedere of the Vatican* (9 cuts). The history of the Belvedere is given (with a bibliography) from its foundation to the time when its treasures took their places in the Museo Pio-Clementino under Clemens XIV and

Pius VI. The year 1471 is remarkable for the foundation of the Capitoline Museum by Sixtus IV. His nephew, Cardinal Giuliano della Rovere, was one of the early collectors of antiques. Among his possessions was the Apollo (of the Belvedere), found probably in 1491, and first set up in the garden of San Pietro in Vincoli. The report that this statue was found at Porto d'Anzio may be true, but is not found in the earliest accounts. When Giuliano became Pope as Julius II in 1503 he had the Belvedere rebuilt and enlarged by Bramante. The original Belvedere was a mediæval castle built under Nicholas V, but this was supplanted in 1490 under Innocent VIII by a pleasure-house in the style of the Renaissance. Besides the Apollo, Julius II placed in the court of the Belvedere the group of Venus Felix with Amor, the Antæus group (now in Florence), the Laocoön (discovered in 1506), the group of Hercules and Telephus, the so-called Cleopatra (1509-11), the "Tigris," and two sarcophagi used as basins for fountains. Julius II was the real founder of the collection of the Belvedere. His successor, Leo X, added the Nile and the Tiber, but no other additions can be traced to him with certainty. Under his successors the fortunes of the Belvedere were various. Sometimes additions were made, and sometimes antiques were removed. These changes are described in detail. *Appendix I* discusses the dependence of Boissard, Sandrart, Schott, and Gamucci upon Aldrovandi in their descriptions of the Belvedere. *App. II* gives lists of the antiques from the Vatican given away by Pius V, with correspondence relating to these gifts. *App. III* gives lists of publications and copies of the antiques of the Belvedere.—R. SCHÖNE, *Hyginus and Hero*. Hyginus (*Fab. cxvi*) tells the story of Nauplios and his vengeance upon the Greeks in close connection with the story of the death of the Locrian Ajax through Athena. The second part of Hero's treatise on Automata describes a puppet theatre in which the tale of Nauplios is still more closely connected with that of Ajax. This passage is derived from Philo Byzantius. Athena is described as appearing above the scene, evidently after the manner of the *deus ex machina* in the real theatre. The description contains much that is theatrical, and may well have a play for its real source. This may or may not be the *Ναῦπλιος Περικαίης* of Sophokles.—**ARCHÄOLOGISCHER ANZEIGER.** *The Gymnasia and Archæology.* Arrangements are in progress to enable at least a limited number of the pupils in all the gymnasia of Prussia to visit the various archæological museums of the country. A similar plan is under discussion in Austria.—**ACQUISITIONS OF THE COLLECTIONS OF ANTIQUITIES IN GERMANY.** VIII. *Karlsruhe* (20 cuts). The Egyptian department comprises about 450 numbers. The additions to the collection of vases since Winnefeld's catalogue (*Karlsruhe*, 1887) have been described by Schumacher, *Jahrb.*, 1889, p. 218 f. Two further additions, an early Attic *tazza* and an *alabastron* in the form

of a horned male head are here published. The collection of terracottas has gained, since Fröhner's catalogue (1860), 250 pieces from Tarentum, mainly archaic, 150 from Kypros, a few from Tanagra, over 100 from Myrina and Smyrna, and a number from various other places. Marble works are a Dionysos, a wounded giant, a bearded satyr, an eagle in combat with a snake over a dead lamb, several fragments of columns, a Marsyas, an athlete, a Hypnos (Winnefeld, *Hypnos*, 1886), a group of a boy and a girl, an Aphrodite, and two portrait-heads. The museum possesses about 1800 originals and copies of bronze, gold, and silver antiques. Eight new acquisitions are described (seven published). These are (1) a bronze pitcher from a tomb near Tolentino. The body of the vessel is engraved with beasts; the handle is a male figure holding on his shoulders two lions. (2) Bronze pail from the same tomb adorned with pressed palmettes and lotos, on the top two bearded men each ending in two snakes, and holding fishes in their hands. (3) Movable hearth. (4) Greek mirror. The support is a draped female figure: the edges of the mirror are adorned with birds, beasts, and amorettes. (5) Engraved cista from Præneste. The handle is formed by two wrestlers: the engraved figures represent women bathing, Seilenoi, Dionysos and companions. (6) Gold bracelet; (7) gold wreath; (8) silver ring-box with pressed figures in imitation of Assyrian style. Another acquisition is an ivory box in form of a temple. The museum also possesses a strip of leather with animals cut upon it in somewhat the style of Corinthian vases. A collection of about 5000 numbers illustrates the history of Germany from the stone age.—IX. *Brunswick* (6 cuts). This museum does not increase regularly but has acquired: a cameo representing Eros on a lion, an ancient imitation of the cameo of Protarchos in Florence; a terracotta dish with pressed reliefs; 24 vases, among them four of proto-Corinthian style and 5 *bucchero* vases; three *pyroques* in the form of griffin-heads; the cover of a large vessel in the form of a female head upon which a small female figure sits; a terracotta plaque with gorgoneion; a small terracotta figure and a number of terracotta architectural fragments; besides a rich collection of samples of stone, especially marble, from Greece, Rome, and Palestine.—X. *Acquisitions of the Collections of German Universities*. The universities of Berlin, Munich, Heidelberg, Giessen, Kiel, Münster, and Rostock possess no originals. At Greifswald and Königsberg the originals are confined to coins. Tübingen received a collection of coins, among them 806 Greek, 447 Republican Roman, 1509 Imperial Roman. Halle, Jena, and Leipzig have received no additions. Bonn has received no additions to its sculptures since Kekulé's catalogue. The collection of vases comprises: one vase of the Apulian-geometric style, 3 Dipylon vases, one Boiotian vase (*Jahrb.*, 1888, pl. 12.1), 3 Corinthian vases, 11 black-figured Attic vases almost all

from the Fontana collection, 3 Attic white lekythoi, 8 Attic red-figured vases, 7 vases from Lower Italy. The Bonn collection of terracottas is remarkable for the large number of pieces of known origin. Of these, 80 are from Tarentum. *Breslau* has received 82 vases from the Fontana collection. *Erlangen* has received a torso of a nude male statuette of Parian marble. *Göttingen* has received, since 1887, a number of terracottas from the Esquiline and a few other terracottas, 73 vases from the Fontana collection, 53 cut stones and rings, 5 gold rings, 2 lion-heads of bone, an enamelled glass vessel, 3 small bronzes (a Græco-Roman Diana, a lion, an Etruscan Herakles), a bronze axe. *Marburg* possesses a small collection of coins, 9 gems, 8 bronzes, 8 terracottas, a few vases, lamps and fragments of pottery, a few Roman relics found in Germany. *Strassburg* has gained, since 1887, two fragments of shields from the pediments of the temple of Athena at Aigina, a Corinthian pyxis, a Corinthian aryballos. *Würzburg* (2 cuts) has acquired numerous antiques since the publication of the catalogue (1865-72). The most important are: 12 vases of Corinthian, Attic, and lower-Italian styles, 4 terracottas, a terracotta lamp, a brick-stamp, fragments of *terra sigillata* from Obernburg, fragments of terracotta from Veii, 4 whorls from Troy, 2 bronze weights, a Greek leaden bullet with inscription, a marble statuette of Herakles, a bronze bust, garlanded, and with a snake's head upon its breast, a boy with a cornucopia, an Athena statuette, a kneeling barbarian, a Greek portrait-head, and a torso of Herakles with the Hydra. *Antiques in Sieburg*. Seven gems in the church at Sieburg are summarily described by L. v. Sybel.—*Casts for Sale*. Casts of the head in the Villa Medici, *Denkm. d. Inst.*, I, 1889, pl. 40 are to be obtained through the secretary of the Institute in Rome. The Wagnersche Kunstinstitut of the University Würzburg offers casts of the so-called Corinthian puteal.—REPORTS OF MEETINGS OF THE ARCHÆOLOGICAL SOCIETY IN BERLIN. 1889. DECEMBER. *Curtius*, on the life and work of the late Karl Bötticher; *Robert*, on terracotta cups with reliefs illustrating the *Iliad*, *Odyssey*, etc.; *Puchstein*, on Pheidias.—1890. JANUARY. Letter from *Jentsch-Guben* concerning a Roman sword found in the Niederlausitz; *Conze*, on an Ionic temple in the Epizephyrian Locri, and on a Roman altar in Mainz; *Trendelenburg*, on the archaic bronzes found in the grotto of Zeus on Mount Ida in Krete; *Furtwängler*, on a bronze Athena-statuette in Florence, on the defects in the Vienna publication (*Vorlegeblätter*, 1888) of the François-vase, on an Attic black-figured lekythos in Palermo with a representation of the lower world; *Schöne*, on Hyginus and Hero; *Weil*, on Laloux and Monceaux, *Restauration d'Olympie*.—FEBRUARY. *Conze*, on various recent publications; *Engelmann*, on the Czartoryski bronze vessel, *Gaz. Arch.*, 1881-82, pl. 1-2; *Furtwängler*, on bronzes at Olympie; *Winter*, on portrait-heads of the fourth century B. C.—

NEWS OF THE INSTITUTE.—NOTES ON THE PUBLICATIONS OF THE INSTITUTE.—*E. Behe* adds four representations of Aphrodite and the goat to those mentioned by Boehm, *Jahrb.*, iv, p. 208 f.; he further discusses representations of a female figure on a ram and decides that Aphrodite is represented (2 cuts); *R. Engelmann* discusses the arrangement of the horses in the eastern pediment at Olympia proposed by Six (*Journ. Hell. Studies*, x, p. 102); a krater in Bologna (cut) perhaps offers some support to Six's theory.—BIBLIOGRAPHY.

No. 2.—O. PUCHSTEIN, *The Parthenon Sculptures*. 1. *Pheidias* (9 cuts). Since Visconti, the pediment-sculptures and the frieze of the Parthenon have been regarded as the work of Pheidias, or at least as made from his designs and under his direction. This is, however, not asserted by any ancient authority. The originals of all the works assigned by ancient authors to Pheidias are lost, but extant copies of the Parthenon enable us to form a judgment concerning his style. The copies here specially discussed are: the Varvakeion statuette, the Lenormant statuette, the torso in the Akropolis museum, the *Minerva au collier*, though others are mentioned. All these show a simple treatment of drapery, falling in large, rounded folds, apparently in imitation of the natural folds of some heavy material. The "Hera" from the library in Pergamon, the Torso in Paris (Athena Medici), the Korai of the Erechtheion, the Athena-hermes in the Villa Ludovisi (*Ant. Bilder.*, No. 60; *Mon. d. Inst.*, x, 56, 3), the colossal Hera (?) in the rotunda of the Vatican, the Athena in Cassel (Friederichs-Wolters, 477), the two Athena-statues in Dresden (one, Fr.-W., 478) and the Athena from the library of Pergamon are shown to belong to the same style or school as the Parthenon. All resemble the Parthenon in costume, treatment of drapery, and quiet pose, though none are copies of the Parthenon. The sculptures of the temple of Zeus at Olympia (Alkamenes is regarded as the artist of all of these) are shown to resemble the Parthenon in the treatment of drapery, so far as the different costume makes comparison possible, and in the pose of individual figures. The technical execution of chryselephantine sculpture is discussed, and the conclusion is reached, that the marble copies of such works can give a correct idea of the drapery of gold which was moulded upon the wooden core beneath. The light, finely-folded, and often unnatural drapery of the pediment figures of the Parthenon is contrasted with the dignified naturalness of that of the Athena Parthenon. The frieze of the Parthenon agrees in these respects with the pediments rather than with the Athena Parthenon. The composition of the groups of the pediments and of the frieze does not agree with what can be found out concerning the compositions of Pheidias. The shield of the Parthenon is passed over, as offering too few points of comparison with the pediments, besides being too imperfectly

known. From Pausanias' (v. 11. 8) description of the birth of Aphrodite on the pedestal of the Zeus at Olympia, it is evident that the figures there represented were all in quiet, upright pose. A fragmentary relief (here published and discussed) on the base of the colossal Athena-torso from the library of Pergamon (*Alterth. v. Pergamon*, II, p. 59) is believed to represent a selection of the secondary figures from the relief on the base of the Athena Parthenos. In this relief, twenty deities were represented bringing gifts to the new-born Pandora. The seven figures of the Pergamene fragment represent persons carrying, each, some object. These are all in quiet posture, and all are turned toward the centre of the composition. The rough sketch upon the base of the Lenormant statuette may also be a copy of Pheidias' composition. Here, too, the general impression made by the figures is that of quiet dignity. The manner of composition employed by Pheidias is, then, so far as can be judged from the works ascribed to him by definite ancient authority, entirely different from the excited, violent motion of the pediment groups and from the easy nonchalance (of the eastern end in particular) of the frieze of the Parthenon. The style of the pediments and of the frieze seems to have come up in direct opposition to the style of Pheidias.—A. CONZE, *Greek Braziers* (pls. 1, 2; 47 cuts). Numerous fragments of terracotta, adorned for the most part with heads (in relief) with projecting beards, were found in laying out the streets of Athens nearly forty years ago, and have come to light since then in the Islands, Asia Minor, Syria, Egypt, Italy, Sicily, and Carthage. A descriptive list of 905 such fragments is here given with numerous illustrations. They belong to braziers (*scaldini*), the adornments being turned toward the fire (see Conze, *Verhandl. d. Philologenversammlung in Heidelberg*, 1865). Such a brazier exists intact in the Fol museum in Geneva, and fragments sufficing for a complete reconstruction are in the Polytechnion in Athens. The upper part consists of a round basin with holes in the bottom, to admit air. Above the basin are three projections adorned with heads. Under the basin the terracotta walls continue to the ground. The bottom is closed, but there are holes in the sides, and an opening at one side, apparently for the removal of ashes. The whole utensil is of one piece, and reaches about to the height of a man's knee. The types of adornment on the projections above the basins are (1) a head with pointed cap, (2) head (Seilenos) with ivy crown, (3) head with hair on end, (4) other human heads, (5) theatrical masks, (6) animal heads, (7) thunderbolt, (8) rosette, (9) rose, (10) mere lines, or entire absence of adornment. These types, so far as they have any special meaning, must have been adopted as *bauxaria* or charms. The workmanship of all these fragments is substantially the same, showing that they belong to one period. Several of them were found in Delos in

a house built about 150 B. C., and destroyed in the Mithridatic war. The same inscriptions (the most frequent is *Hekataios*) and other trade-marks are found in various places. These braziers were, then, objects of export. They seem to have come from one place, very likely Delos, or perhaps Athens. No fragment of such braziers has been found in Pergamon.—F. STUPNICKA, *On the Klazomenian Dolon-sarcophagus* (2 cuts). A small amphora in Munich (No. 583, Jahn), probably from Vulci, has two paintings, both illustrating the same story. The technique is that of the middle Attic style with black figures. The only perfect parallel in details is, however, the Northampton vase in Ashby Castle (Gerhard, *Auserl. Vas.*, iv, 317, 318). Red color is freely employed, white sparingly. On one side, five figures are represented; the two outer figures are armed men standing quietly; the central group consists of two warriors, facing each other, with lances raised as for combat. Between them kneels a somewhat smaller figure: about his shoulders hangs a hide; upon his feet he has shoes with wing-like projections behind—shoes such as are not infrequently employed by vase-painters to imply that the wearer is a swift runner. The three central figures are now headless, and part of the shields of the two warriors is gone, while of the figure at the extreme left only a part of the shield remains. The scene represented is the slaying of Dolon. In style and composition, the vase-painting is older than the painting of the Klazomenian sarcophagus (*Ant. Denkm. d. Inst.*, i, 1889, pl. 44). On the sarcophagus, Dolon wears the hide as a close garment for a disguise. This points to a version of the story somewhat different from that of Homer. Hipponax, who mentions the realm of Rhesos as *Abelion τοῖς Λαῖς*, may have drawn from an older source, or may himself have treated this story. On the other side of the vase, a bearded man with a sceptre is sitting on a stool at the left. A slave brings him a drinking-cup and a jar. At the right, a slave is watering two horses. The scene represented is the watering of the horses of Rhesos in the Grecian camp, while Diomedes refreshes himself with wine. The chariots on the Klazomenian sarcophagi all have eight spokes. On the Greek mainland, the form with four spokes prevails until the period of the "severely beautiful" (*strengachin*) vases with red figures.—K. WERNICKE, *Addition to the List of the Works of Skopas*. An epigram in the *Anthologia* (iv, 165, 233) mentions Skopas as the artist of a *Hermes*. The word *hermes* means here a "term," not a statue of the god *Hermes*. Pliny (xxxvi, 28) mentions a *Janus* concerning which there was doubt whether it was a work of Praxiteles or Skopas. As a *Janus*, it could be neither, but as a *hermes* with two faces it might be the one referred to in the epigram. Pliny speaks of the gilding of the "Janus." In that case, it was probably of bronze, so that the *Aphrodite Pandemos* in Elia is no longer the only known bronze work of Skopas.

Pliny proceeds to mention a *Cupido*, which he implies was a portrait of Alkibiades. This has nothing to do with Skopas, but is connected with the preceding only on account of uncertainty concerning the artist. There is therefore no reason for assuming an elder Skopas.—**ARCHÄOLOGISCHER ANZEIGER.** *Annual Report on the activity of the imperial German Archaeological Institute.*—*Archæology and the Gymnasia.* Visits have been made, by members of gymnasia, to Berlin, Bonn, and Trèves, where archæological lectures were delivered for their benefit.—**HÜLSEN, PETERSEN,** *The Apollo of the Belvedere.* Italian documents, especially the sketch-book of the so-called Bramantino in Milan, show that this statue was found not in Porto d'Anzio but in the lands of Cardinal della Rovere, probably those of the *Commenda* of Grottaferrata. The right forearm seems to have been restored twice, in different ways.—*Acquisitions of the Museum of Fine Arts in Boston in the year 1889.*—*Photographs from Greece.* Photographs taken by Freiherr v. Stillfried are for sale by the *E. Quaa'schen Kunst- und Buchhandlung.*—**REPORTS OF MEETINGS OF THE ARCHÆOLOGICAL SOCIETY IN BERLIN, 1890.** **MARCH.** *Gercke*, on the interpretation of portraits; *Furtwängler*, excavations in Kypros.—**APRIL.** *Wernicke* spoke on the art of Pheidias; *Treu* on the pediments at Olympia; *Henry Bouditch* and *Treu*, on composite photographs.—**MAY.** *Conze* reported on archæological activity in Austria; *Köpp* spoke on the so-called giant columns; *Puchstein*, on the relation of the Myceno-Tirynthian palace to that of Troy; *Curtius*, on the restoration of the *anta*, with the inscriptions of the horsemen, before the propylæa at Athens.—**NEWS OF THE INSTITUTE.**—**NOTES ON THE PUBLICATIONS OF THE INSTITUTE.** *F. Hauser* explains the representation on the *pelike* with the contest between Apollon and Marsyas (*Arch. Ztg.*, 1869, pl. 17; Overbeck, *Kunstmyth.*, *Atlas*, pl. 25, 4) as follows: Apollon has finished his lyre-playing, which he has accompanied with singing, and calls upon Marsyas to play the flute and sing. This is the point of the story as told by Diodoros (III. 59). A Muse offers Marsyas a roll with text for his song. The girl with a basket is a kalathiskos-dancer, who was to assist Marsyas as the Muses had assisted Apollon. *F. Hauser* also reports that the "Biscuit figurine from Smyrna" (*Fried.-Wolt.*, 1968; *Arch. Ztg.*, 1849, pl. 1, 2, 1880, p. 83; Michaelis, *Anc. Marbles in Great Britain*, p. 157, 420) is a work of the porcelain manufactory in Naples.—*A. S. Murray* sends an impression of a hematite gem in the British Museum (cut). A bull is represented with a man in front of him and one above him. Mr. Murray suggests that the figure above the bull may be thought of as behind him, and the taming of a bull may be represented. The work corresponds to the Mykenian type.—Two slight corrections to *Bethe's* article (*Jahrb.*, 1890, No. 1) *Aphrodite on the goat.*—**BIBLIOGRAPHY.**

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JOURNAL ASIATIQUE. 1890. April-June.—C. DE HARLEZ, *San-Li-Tu, or picture of the three rituals*. This work is by Niechi who lived in the x cent. A. D., but its object is to reestablish the rules and customs of the ancient rituals in their primitive forms. In order to do this, the author has published illustrations of all the objects and instruments, in their early forms, that were prescribed by these rituals. In his task he made use of three main sources, Tcheng, Yuen, and Hia-Heou-tchang, the last of whom lived in the first century B. C.: all of them had already followed the system of explanation by pictures of the objects. Some plates seem also taken from the Erh-ya, which dates from the third century A. D. The present article is based upon a new edition of the *San-li-t'u* made by order of the emperor K'ang-hi in 1686 A. D. Costumes, buildings, vases, musical instruments, weapons, decorations and emblems, seals, draperies, funerary apparatus, etc., are all described and illustrated in order, showing how at a very early date special forms and categories of objects were assigned to special purposes and classes of individuals.

Sept.-Oct.—J. HALEVY, *The correspondence of Amenophis III and Amenophis IV*. A transliteration, translation, and comment are given of that part of these documents which have been published in autograph by the Berlin museum. They are of great importance for the history of the East in the xv cent. B. C., and have often been referred to in the *JOURNAL* as discovered at Tell-el-Amarna in Egypt in 1887.

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MITTHEILUNGEN D. K. DEUT. ARCHÄOLOGISCHEN INSTITUTS. ATHENISCHE ABTHEILUNG. Vol. XV. No. 1. 1890.—B. GRAEF, *The group of the Tyrannicides and Works of kindred style in Athens* (3 cuts). The statue of Antenor in the Akropolis museum gives an idea of the style of that artist. The question arises, whether the Naples group of Harmodios and Aristogeiton can be a copy of a work by the same hand. Comparison with other archaic statues from the Akropolis (one bust is published) shows that the statue of Antenor is the work of an Attic artist who had adopted to some extent the methods of the "school of Chios." Comparison of the Naples group with other works shows a kinship between it and the sculptures of Olympia and Sicily. The Naples group cannot, therefore, be a copy of the work of Antenor, and must be copied from that of Kritios and Nesiotes. A work of this style was then set up in Athens Ol. 75 = 477/6 B. C. Ten works are described, which, though found in Attika, show kinship with the Peloponnesian sculptures. The influence of these works is shown in some of the vase-paintings of Euphronios and his contemporaries. The style of these works was not, at any time, exclusively adopted in Athens, and maintained itself only for a limited period: it was of non-Attic origin. Its

somewhat heavy seriousness and its naturalness are contrasted with the mannerisms of the "school of Chios," against which it seems to protest. The influence of this "Peloponnesian" art is traced in the sculptures of the Parthenon. The Eleusinian relief, a stele from Theopiai, and the dancing-girl of *Bronzi di Ercolano*, II, 295, show that the same school spread its influence over Boiotia.—R. WEISSHÄUPL, *Attic sepulchral lekythos* (pl. 1). A *lekythos* from Eretria is published. The red clay of the vase appears only at its upper edge and at the edge of the foot. The shoulder and the upper part of the belly of the vase are covered with yellowish pipe-clay, the other parts with black varnish. The shoulder is ornamented with a spray of three palmettes and two blossoms, below which is an egg-and-dart pattern. A meander goes round the upper part of the belly. The picture on the belly represents a sepulchral monument, to the right of which stands a draped youth, to the left, a draped female. The female holds in one hand a long ribbon, in the other a *lekythos*. The youth holds a garland and a staff. The monument has an altar-like base upon which rise seven steps, and upon these stands a pointed stelé. The form of the mausoleum at Halikarnassos was then known in Athens in the fifth century. Various colors are used, from black to golden yellow. The monument and the nude parts of the female figure are of yellowish white. The vase belongs to the period of the transition from the black-figured to the red-figured style. Earlier *lekythoi* show yellowish pipe-clay and extended use of varnish-coloring, later ones have much black color, and the scenes represented upon them are sepulchral. This vase combines the peculiarities of the two periods. Nineteen vases, belonging to the same class as this, are described.—O. ROSSNACH, *The Nemesis of Agorakritos* (cut). The cut gives a fragment of a colossal marble head in the British Museum. It was found, in 1820, in the temple of Nemesis at Rhamnous, and is justly supposed to be a fragment of the statue of Nemesis by Agorakritos. Holes in the head show how the *stephanê*, the stags, and Nikai (mentioned by Pausanias) were secured. An idea of the appearance of this adornment may be derived from various coins though there is no known copy of this statue. The style of the fragment is similar to that of other sculptures of the age of Pheidias.—E. SZANTO, *The History of Thasos*. The external history of the smaller Greek States in the fifth and fourth centuries B. C. stands in close relation to the struggles between the democratic and oligarchic parties. Some light is thrown upon the political struggles of Thasos by inscriptions (especially those published by E. MILLER, *Revue archéologique*, Beehtel, *Abhdlgn. d. göttinger Gesell. d. Wiss.*, 1885, 1887). The oligarchy of 411 B. C. (Thouk., VIII, 64) is identified with a government of 360 mentioned in an inscription. The oligarchy seems to have existed until 407 B. C. The inscription published by Hicks,

Journ. Hell. Stud., viii, pp. 401 ff., is here published with different restorations, and is taken to refer to the reestablishment of democracy in 407 B. C.—A. BRÜCKNER, *Poros-sculptures on the Akropolis*. II. *The larger Triton-pediment* (pl. 2; cut). The author's article upon the Typhon-pediment receives some additions and corrections. The fragments of the Triton-pediment are here published for the first time. The drawing, as well as the arrangement of the fragments, is by E. Gilliéron. The body of Herakles with part of Triton behind it is the chief part of the sculptures preserved. In addition to this, parts of the fishy body of Triton, four hands with parts of arms, a fifth hand holding a bird, and parts of serpent coils, formed parts of the group. As restored, the group consisted of Herakles and Triton struggling, and Kekrops as umpire holding an eagle in his right hand. Kekrops is represented with serpent-legs, parts of which, and the right hand and part of the eagle, are the only fragments of this figure preserved. Of Herakles and Triton the greater part is preserved from the breast down. No heads belonging to this pediment have been found. Herakles has put his left arm about Triton's neck, and holds his own left wrist with his right hand; his left leg, next to Triton, is much bent, the right leg being somewhat stretched out behind; the right knee and toes touch the ground. Triton is trying, with his left hand to push off Herakles' right arm; with his right hand, he seems to try to hold some object lying on the ground at his side: this was probably some attribute, perhaps a fish. The tail of Triton extends almost to the extreme left-hand corner of the pediment; his head extends a little beyond the centre into the right-hand part of the pediment; the head of Herakles is entirely in the left-hand part. The right-hand half of the pediment, except the small portion occupied by the front part of Triton, is occupied by the figure of Kekrops. The presence of Kekrops shows that the contest must have taken place in Attika. In Ionic representations, Triton seems to have been feasting, and has a garland on his head, or a drinking-horn in his hand. Here, there is no hint of a feast. The workmanship and the coloring of this pediment are like those of the Typhon pediment, but the relief is higher (about 60 cent. here, and 42 cent. in the Typhon-pediment), if sculpture almost entirely free from the background, as this is, can still be called relief. Similarly, in the two smaller pediments, the relief of the Hydra-group is much lower than that of the Triton-group. These differences are due to the difference of subject. The block upon which is the fragment of Triton's tail, and which forms the left-hand extremity of the larger Triton-group, is worked to a distance of 22 cent. below the relief. To this distance, then, the block was visible above the projecting horizontal cornice. The entire pediment, including this base for the sculptures, was then 1.22 met. high. The angle at the corners was 13°.

Hence, the whole length of the pediment was 10.50 met., which gives about 12½ or 13 met. for the whole width of the building. This was about the width of the earliest temple of Athena.—R. HEBERDEY, *The Statue of Antenor* (2 cuts). In opposition to E. Gardner (*Journ. Hell. Stud.*, x, pp. 278 ff.), it is shown that there is no reason to deny that the base with the signature of Antenor belongs to the statue with which it was joined by Studniczka (*Jahrb.*, II, pp. 135 ff.) and Wolters (*Mith.*, 1888, p. 226). The holes for clamps or pegs are not intended to connect the statue with the base and the column under it by one peg, but are for use in joining them by pouring in molten lead.—MISCELLANIES.—H. SCHLIEMANN, *Inscriptions from Iliou*. Two fragmentary inscriptions.—A. E. KONTOLEON, *Inscription from the Island of Nisyros*. An inscription in honor of Gnomagoras son of Dorotheos of Nisyros.—LITERATURE.—REPORTS OF MEETINGS.

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REVUE DES ÉTUDES GRECQUES. 1890. April-June.—MICHEL BRÉAL, *Græcæ . . . artes intulit*. This is a rapid examination made to show that nearly all the terms used in modern languages to designate the first elements of sciences and letters are words of Greek derivation.—A. H. SAYCE, *Two Greek contracts from the Fayûm*. These two papyri were found at Hawara by Mr. Petrie in 1889. They give interesting information on the topography of the Fayûm at the Roman period, and on Greco-Egyptian law. Both date from the VI cent. A. D., one from 512, the other from 513. The first contract states the sale of a monastery in the Fayûm for eight gold *solidi* and 11,200 pieces of "large silver." The second also records the sale of a monastery for ten gold *solidi*.—G. A. COSTOMIRIS, *Study on the Unedited Writings of ancient Greek Physicians*. This is the second series of the study, and includes (1) Daremberg's Anonymous writer, (2) Metrodora, (3) Oribasios, (4) Aetius. The latter is of especial importance, and a complete descriptive list of his mss. is given.—J. DARMESTETER, *James of Edessa and Ptolemy*. This study is to show, by comparison of lists of geographical names in the two writers, that the geography of James of Edessa is almost entirely derived from Ptolemy.—CHRONIQUE.

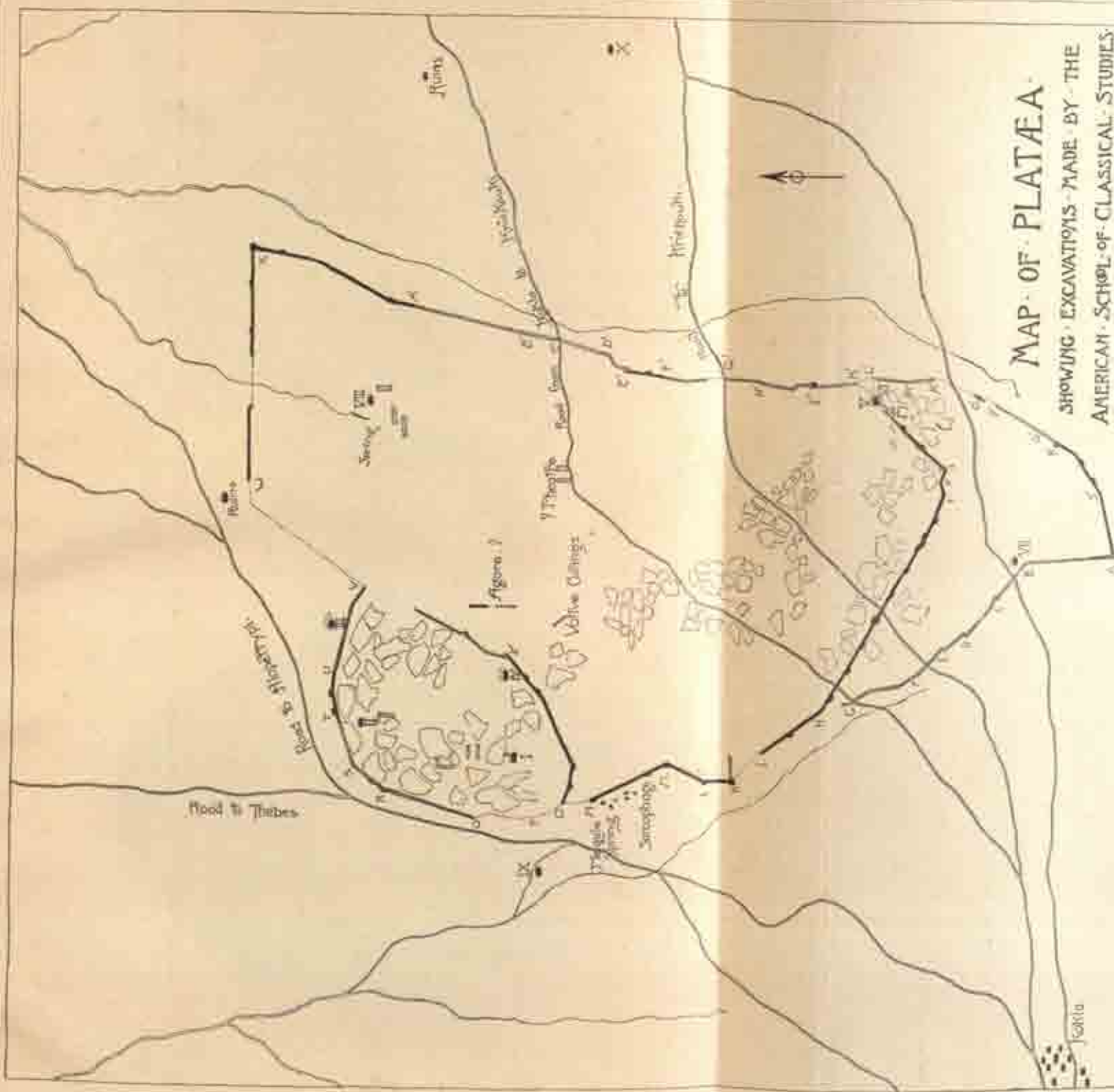
July-Sept.—GUSTAV HIRSCHFELD, *The Inscriptions of Naukratis and the history of the Ionian Alphabet*. In this letter to M. Sal. Reinach, the author recapitulates the views he holds in the controversy that has been going on regarding the inscriptions from Naukratis. He disagrees entirely with Mr. Gardner; he does not believe there were any Greeks at Naukratis before Amasis (VI cent.), or that any of the inscriptions found by Mr. Gardner are as old as the Abu-Simbel inscriptions. He is led by his recent researches to entertain new views on the subject of the entire history of the Ionian alphabet. He derives the three-branched *sigma* from

the Phœnician *tead* and not from the *shin*, and considers that there were several branches of the Ionian alphabet which, for a certain time, carried on an independent development.—E. LACOSTE, *The Poliorcetics of Apollodoros of Damascus*.
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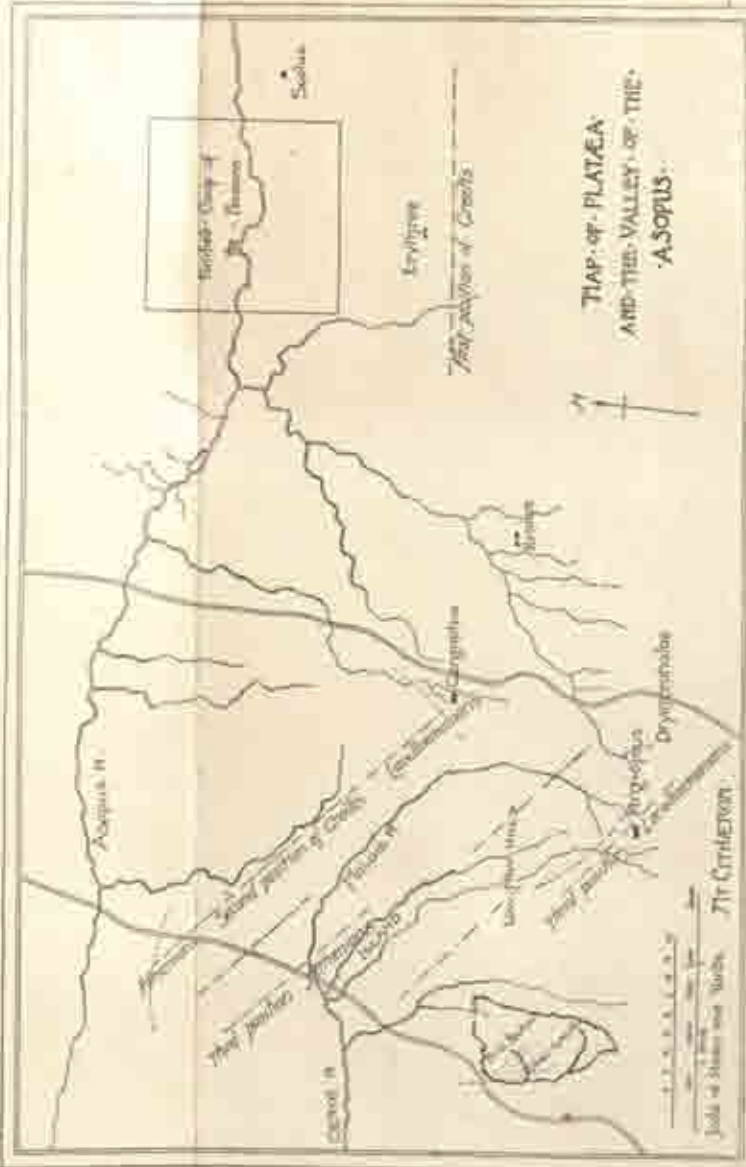
RIVISTA ITALIANA DI NUMISMATICA. 1890. No. 2.—F. GNIECCHI, *Notes on Roman numismatics*. They are divided into two parts: x treats of some coins of the empress Helena and of Fausta; xi makes some contributions to the *corpus numorum*. Under the first heading, the remarks are based on some small bronze coins of Helena and Fausta found in Egypt in 1888: they go to confirm the attribution to one Helena, the mother of Constantine, of all the coins bearing that name, and to one Fausta, the second wife of Constantine, of all those that are inscribed with that name. Rectifications and additions are made to Cohen's descriptions, and there follow some general considerations on the true types of coins of these two Augustas, showing a confusion between them, owing mainly to an interchange of reverses. Thus, the only official types of their bronze coins are those of the three in gold, all others being hybrids. This contribution to the *corpus numorum* is taken from the small and ordinary collection of the Museo Artistico Municipale of Milano. Most of them consist of slight variations. The pearl of the collection is a magnificent silver medallion of Gallienus with the *adlocutio*, remarkable for the *taenia* decorating the emperor's head—the only case in Imperial numismatics.—G. GAVAZZI, *Conjectures on the attribution of some Lombard tremissi*. The three *tremissi* here illustrated all have the same monogram. Though undoubtedly Lombard, they appear to bear the names of the Frankish kings Karl and Karloman. They are here attributed to the time of Pepin's expedition to Italy in 756, and the monograms are so as to give the names of Pepin, Karl, and Karloman, Roman patricians.—V. CAPOBIANCHI, *New remarks on some coins struck by the Popes and in Comtat Venaisin and Avignon*.—S. AMUNO-SOLI, *An inedited soldino of Asti of Charles V.*

No. 3.—P. STETTINER, *Origin of coinage in Italy*. This is a popular summary of current information regarding the early use of metals in Italy for commercial purposes: the *aes rude*, *aes grave* and *aes signatum*. While granting that the art of coining may have been derived from Lydia or Greece, the author regards the custom of using metal for exchanges among Italic nations as indigenous, and to have originated before the seventh century B. C.—F. GNIECCHI, *Notes on Roman numismatics*. Five inedited bronzes are published which were the most important numismatic pieces found in Rome during 1889. They are a bronze medallion of Hadrian, one of Faustina the Elder, a rare consecration medallion, which gives the occasion for a general treatment of the Roman *consecratio* or apotheosis of

the emperors and empresses. Then come bronze medallions of Marcus Aurelius, with a circle, and of Gordianus III, as well as a bronze of Gallienus and Valerianus.—G. JATTA, *A Coin of Rubi*. The writer takes occasion of the publication of a coin of the Apulian city of Rubi=Ruvo, colonized by Greeks, to deny Friedländer's hypothesis, that such coins are Messapian, which would involve an unknown Messapian conquest. He believes the coins to be essentially Greek.—E. TAGLIABUE, *Did the mint of Mesocco really exist?* It has been the general opinion that, early in the XVI cent., Gian Giacomo Trivulzio established at Mesocco a mint, which continued until 1526 when the town was destroyed. This is shown to be a groundless fable; and it is proved that the mint was established at Roveredo as early as 1497, of whose productions a careful study is made.—A. G. SAMSON, *The Coins of the Neapolitan duchy*. The Neapolitan mint was reestablished while the city was in direct dependence on the Byzantine empire, after the visit of Constant II, when Basil was appointed first duke in 661-2. This first series lasts until the middle of the eighth century. Then begins the second series, which shows an autonomy at times complete, at times holding to the connection with Byzantium. This period lasts up to the Norman conquest in the XII cent., though the types of its mint were preserved for nearly a century longer. A. L. F., Jr.



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